Drug & Cosmetic INDUSTRY

AUGUST, 1950

FEATURE ARTICLES • •

WHY NEW PRODUCT PROGRAMS FAIL	Tom Smith	178
THE PRESCRIPTION LEGEND		180
COMBINATION OF FUNCTIONS IN COSMETICS	Harry Hilfer	182
NOW, OR NEVER		184
ORGANOLEPTIC TESTING	L. C. Cartwright	186
EDUCATING THE SALESMEN ON NEW PRODUCTS	Clyde Gardner, Jr.	188
DYSMENORRHEA	Milton A. Lesser	190
THE GLUCONATES	George B. Stone	192

DEPARTMENTS • •

KEEPING POSTED	Thomas R.Farrell	173
PACKAGING AND SELLING	Frazer V. Sinclair	195
NEW PRODUCTS AND NEW PACKAGES	Frank Child III	201
NEWS	Frank Child III	209
MANAGEMENT FORUM	Francis Chilson	225
PATENT THOUGHTS AND TRENDS	Thomas Cifelli, Jr.	235
YOUR TRADE-MARK RECORD	John H. Graham	239
COMPOUNDER'S CORNER	Milton A. Lesser	242
PERFUMER'S SHELF	Milton A. Lesser	244
ADVANCING THERAPY	Milton A. Lesser	247
READERS' QUESTIONS	Milton A. Lesser	251
ABREAST OF THE MARKETS	Frank Child III	253
INDUSTRY'S BOOKS	Harry G. Kelbly	259

THOMAS R. FARRELL, Editor
FRANCIS CHILSON, Production Consultant
MILTON A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
FRANK CHILD III, News Editor
HILDA C. McCOLLOM, Art Director

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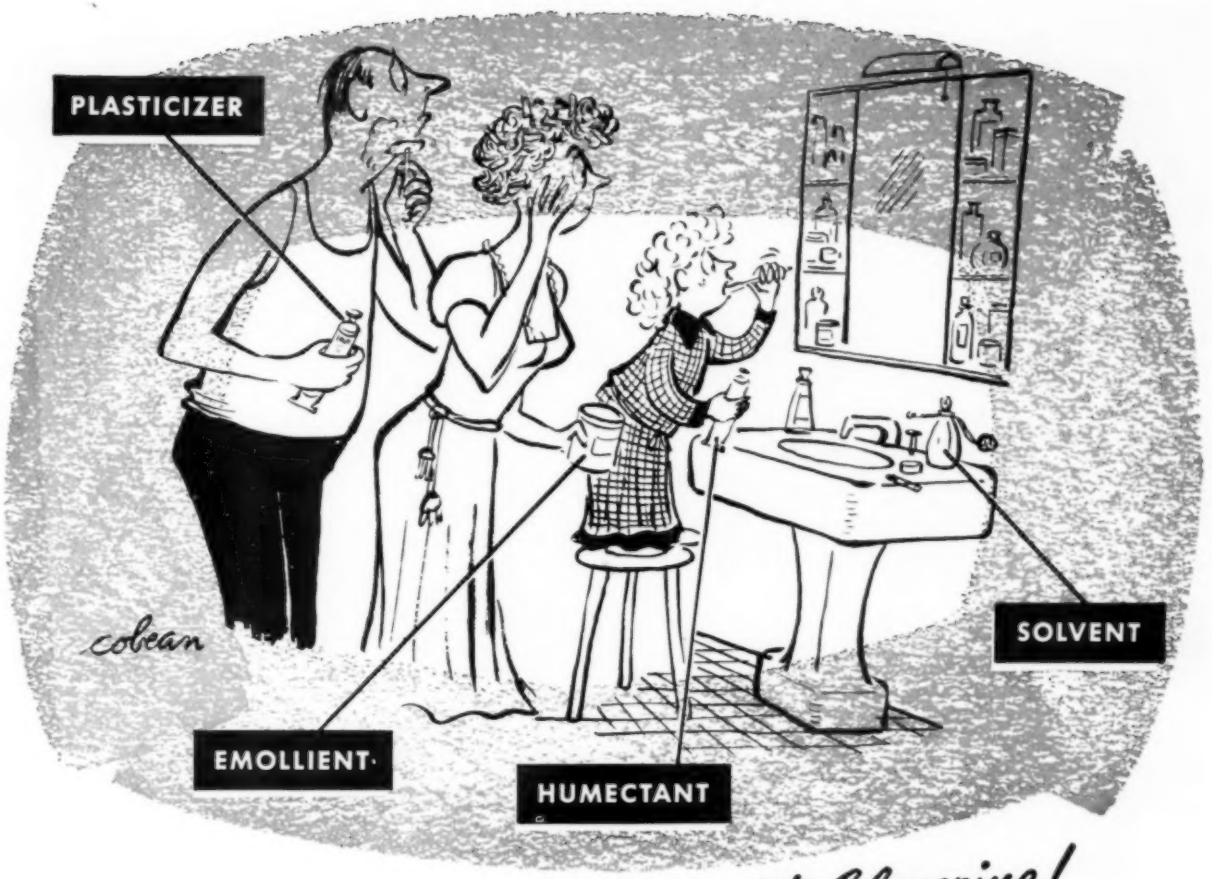

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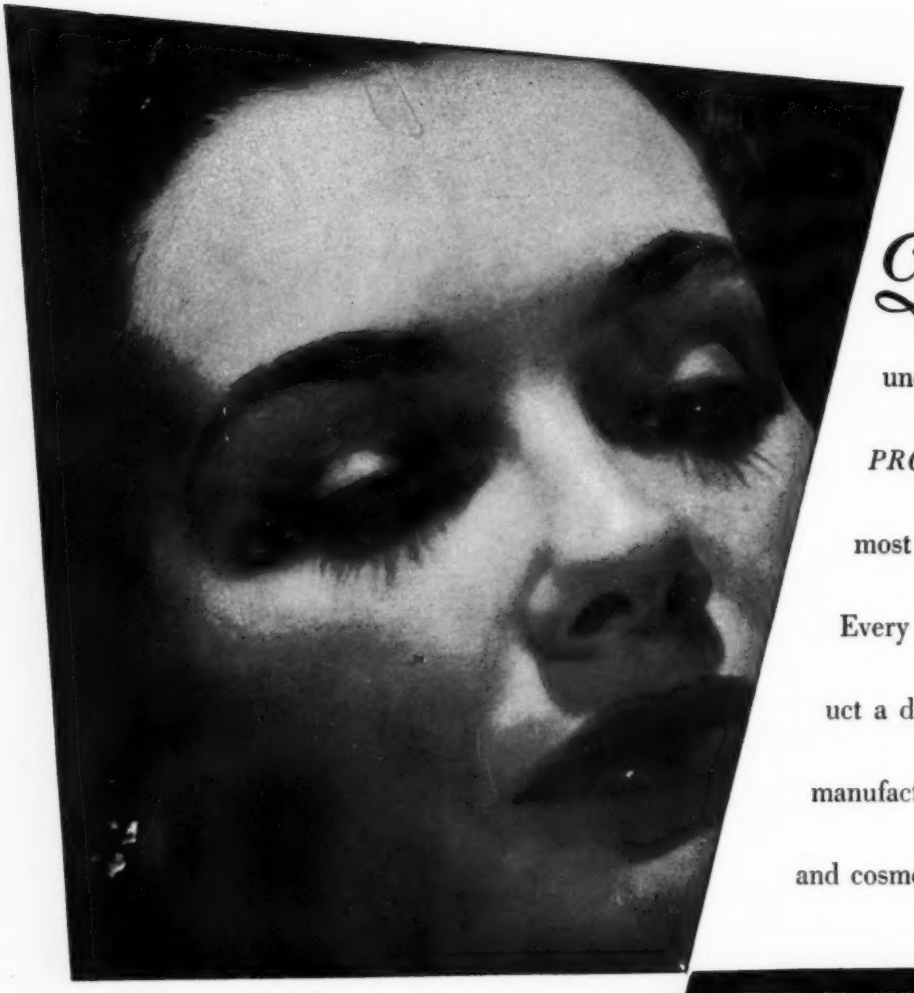

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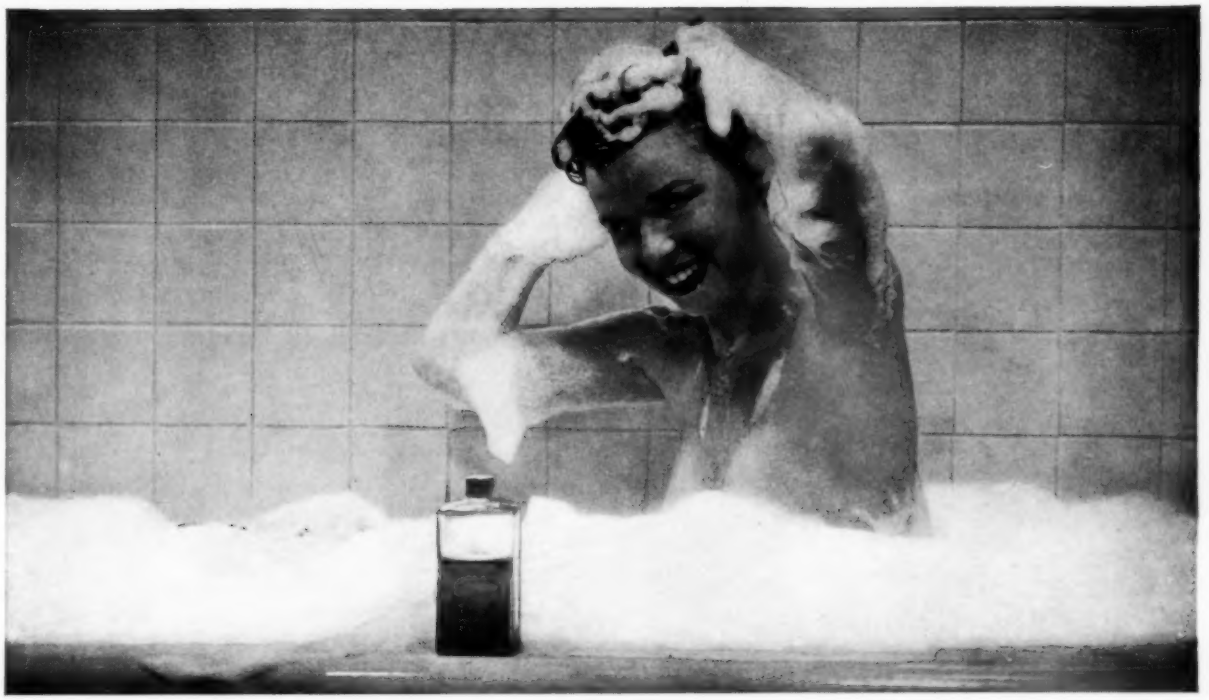

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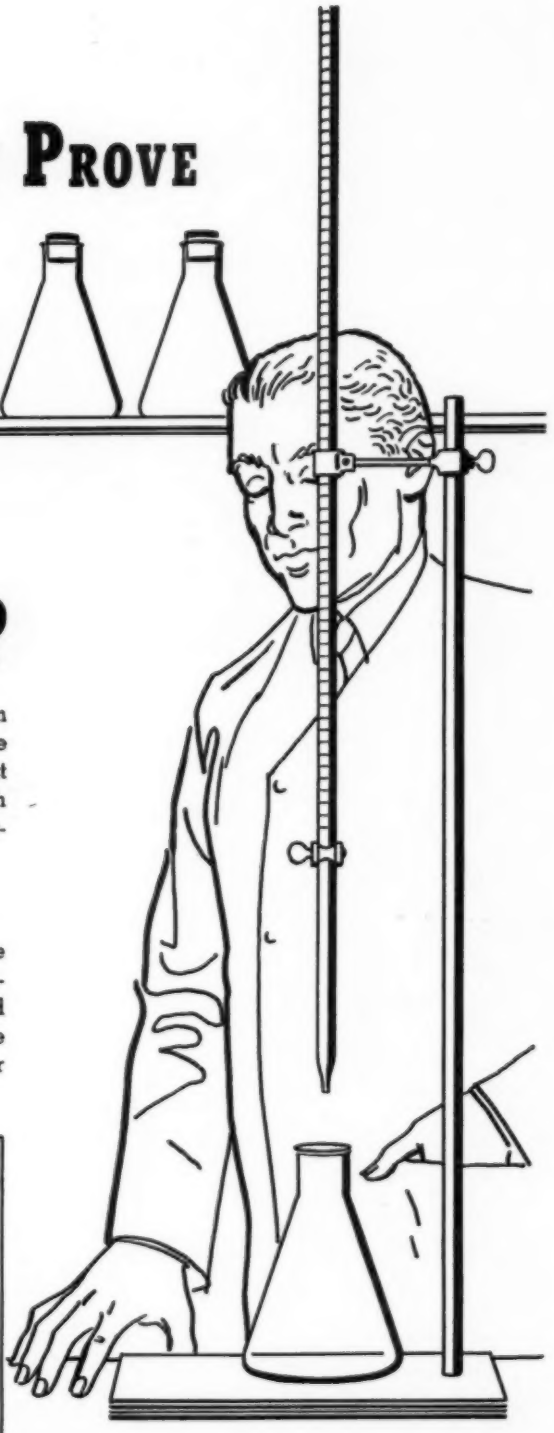

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Cream, U.S.P.	117/125	65/70	24Y 1R	175/220
Blonde, U.S.P.	117/125	65/70	35Y 5R	175/220
Extra Amber, U.S.P.	116/124	65/70	35Y 6.5R	175/220
Amber, U.S.P.	116/124	65/70	35Y 10.5R	175/220
Red Veterinary	116/124	70/75	35Y 25R	175/220
Dark Green	125/139	100/105	Dark Green	110/150
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Anomalous White, U.S.P.	125/139	80/85	1.5/2Y	110/150
Pennsoline White, U.S.P. (soft)	110/118	50/54	2Y	220/250
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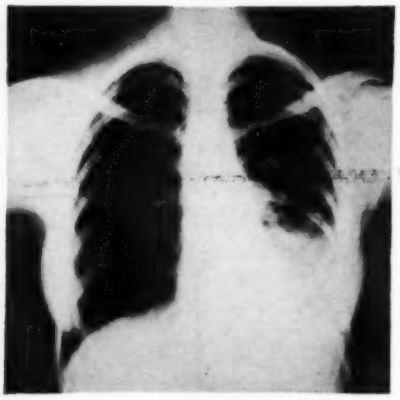

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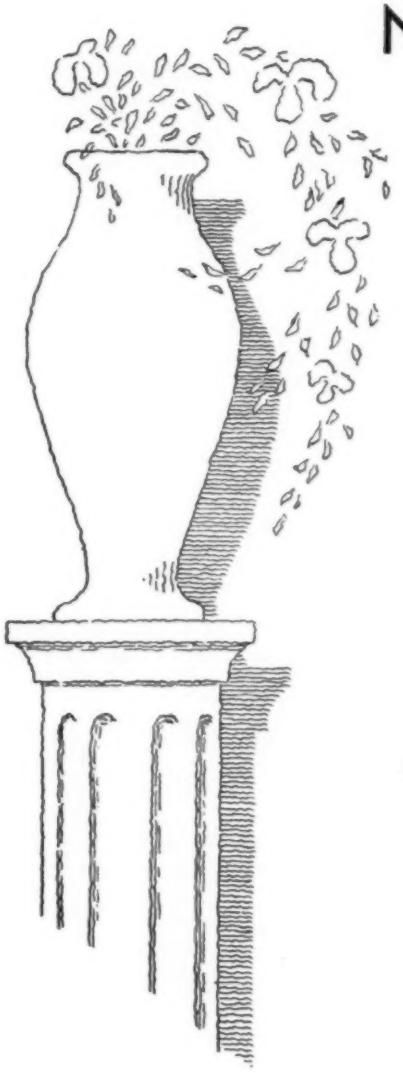

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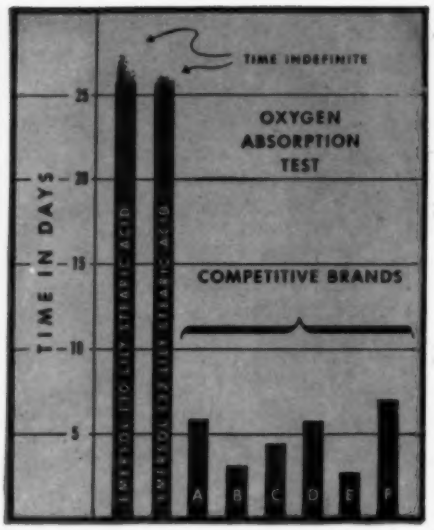

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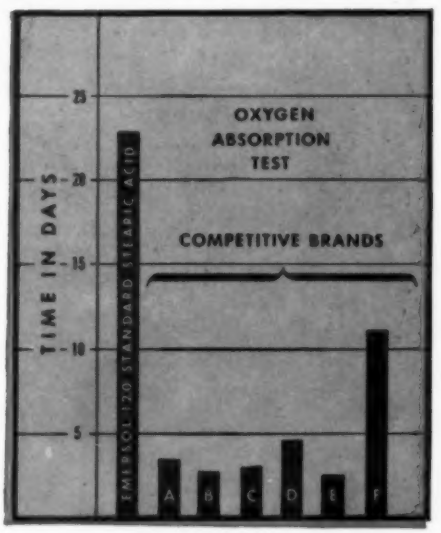

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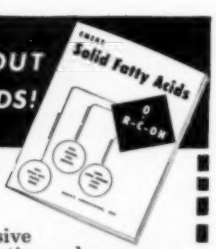

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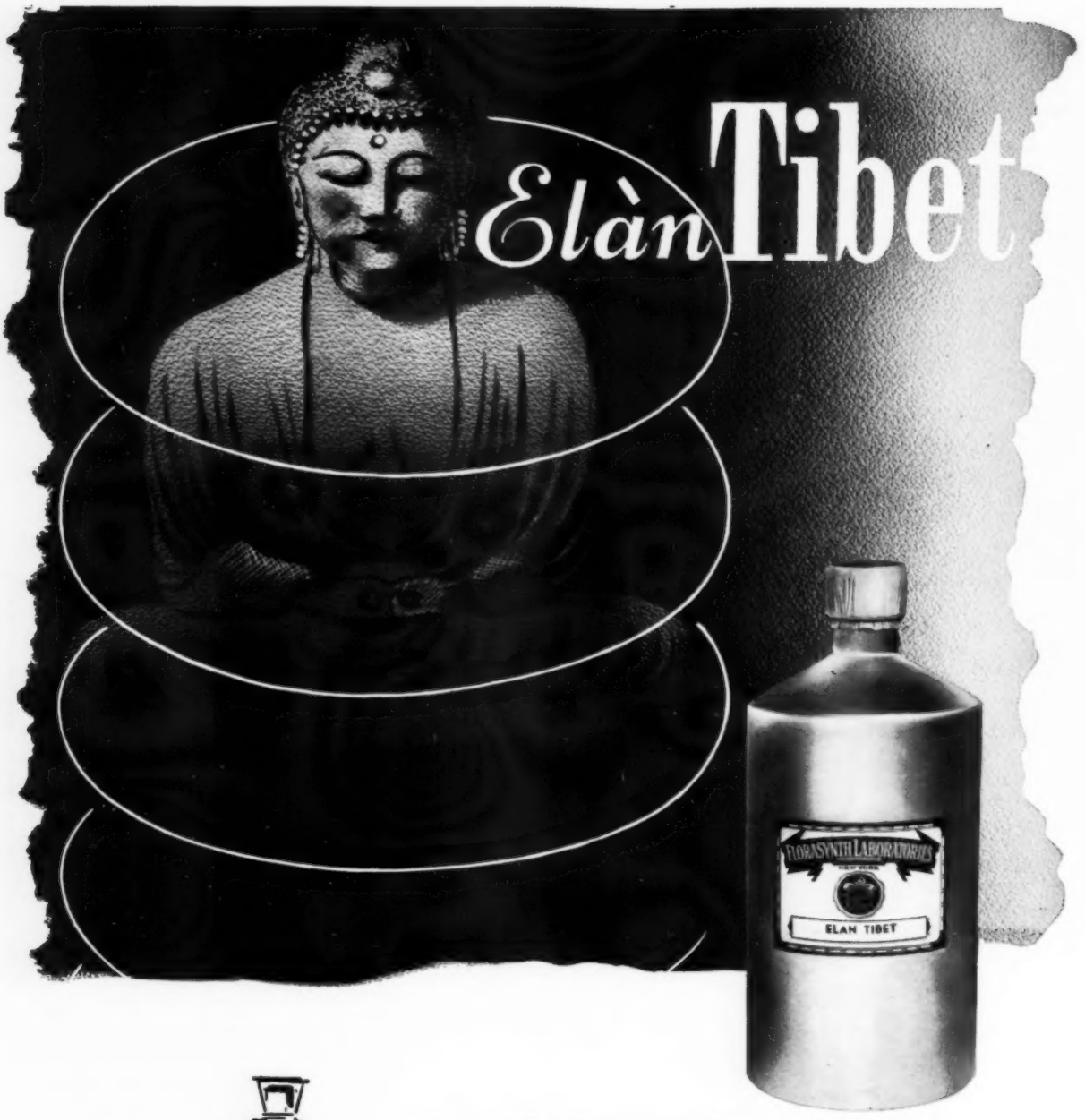

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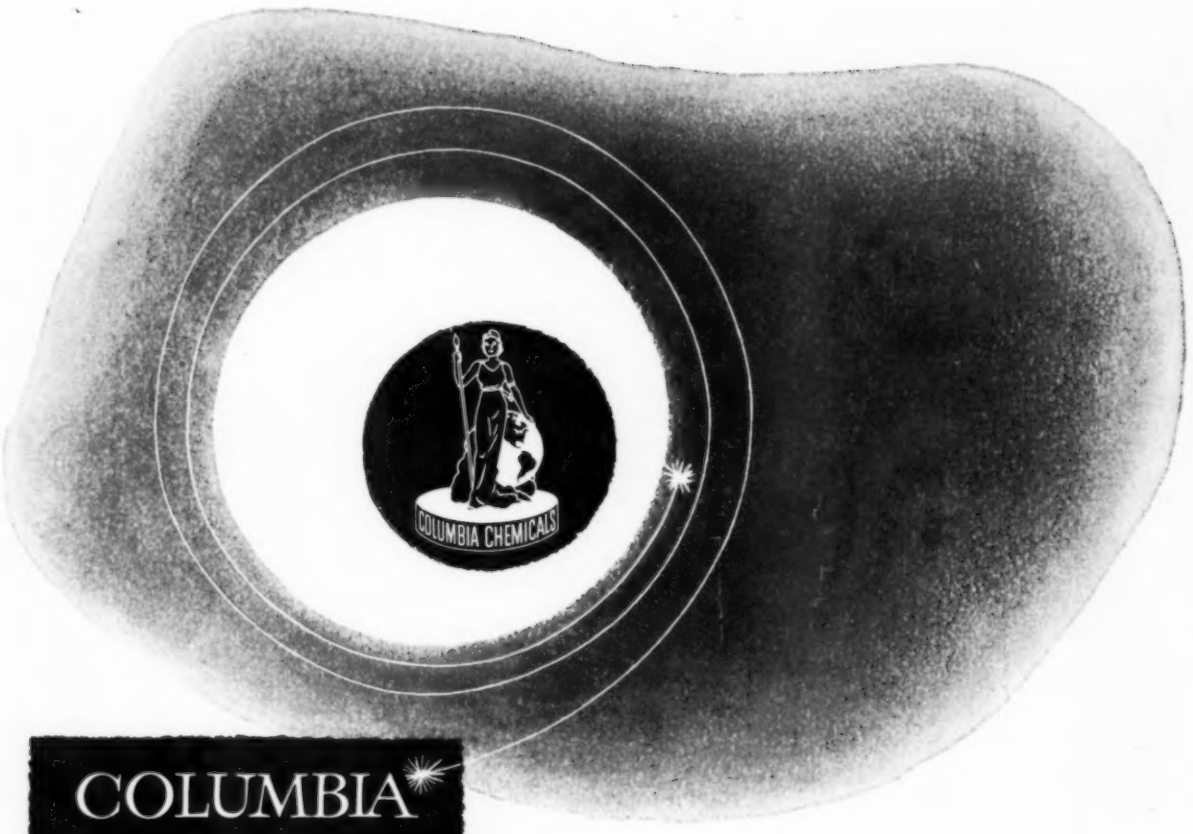

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No matter how you use Sodium Bicarbonate—for repacking, compounding, or special applications—you'll find that Columbia Sodium Bicarbonate U.S.P. fits your precise needs.

Columbia Sodium Bicarbonate is manufactured according to the most rigid standards to meet your requirements for highest quality in your finished product.

This assurance of purity, and the favorable Columbia factor of quick, efficient delivery, are excellent reasons why you should make Columbia your source of supply. Your inquiries are invited. Pittsburgh Plate Glass Company, Columbia Chemical Division, Fifth at Bellefield, Pittsburgh 13, Pennsylvania.

Columbia Sodium Bicarbonate equals or exceeds every U.S.P. standard and is noted for its purity, whiteness and uniform screen size.

It is available in powdered or granular form and is packaged in paper-lined barrels, kegs and in paper valve bags.

COLUMBIA CHEMICALS

CHICAGO • MINNEAPOLIS • BOSTON
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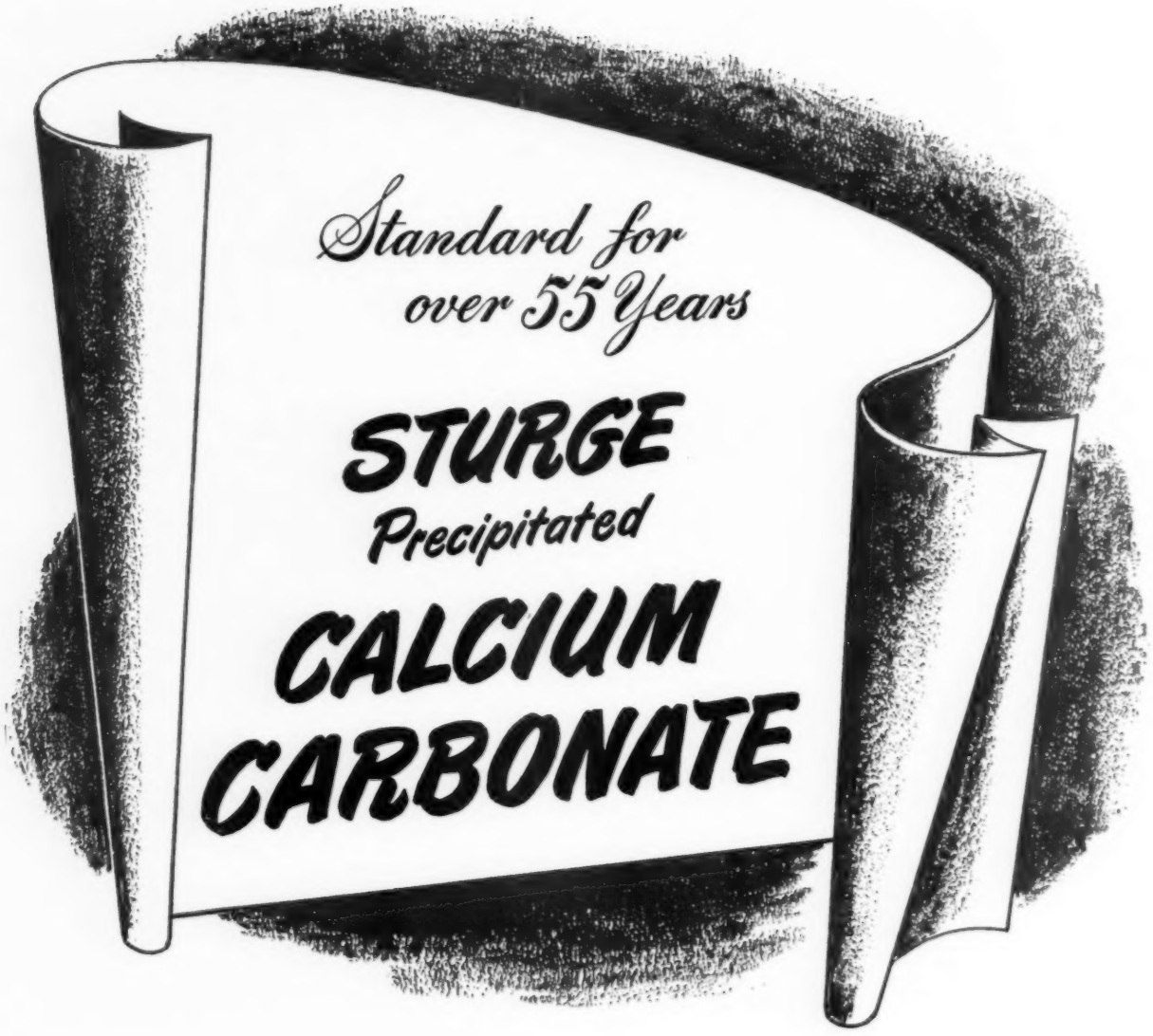
PAINT • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY



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For you* and *for your product alone a distinctive fragrance with virtuosity and personality. D&O original scents are composed with irresistible subtleties to create olfactory impressions that coax and cajole attention to ***your product.*** Yet, surprisingly enough, ***D&O originals are modest in cost.*** D&O offers you more than 150 years' experience, vast research and manufacturing laboratories and a staff of master perfumers to help solve your perfuming problems. ***Consult D&O.***

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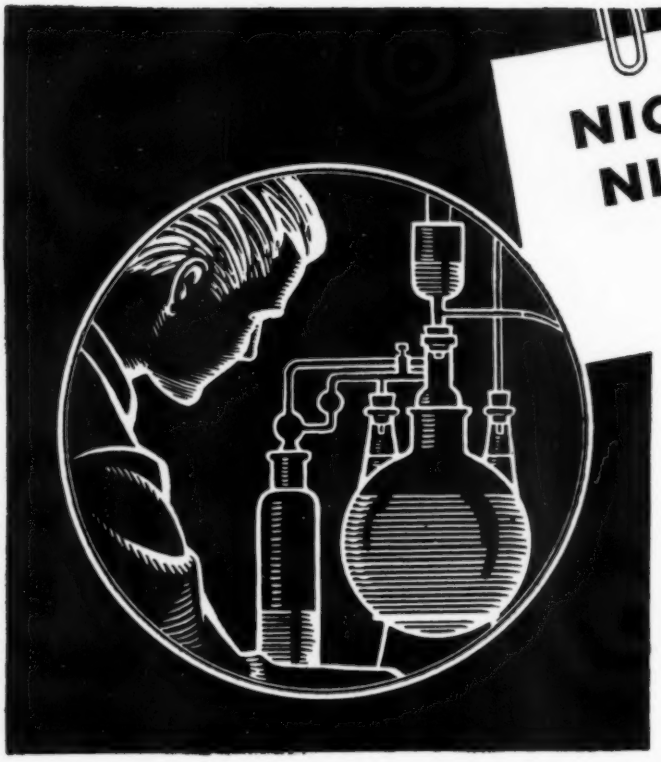

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Nicotinic Acid and Nicotinamide are members of the Vitamin B Complex, sometimes described as Vitamin PP, and are recognized as specific in the prevention and treatment of pellagra. Both play an important role in carbohydrate metabolism. It is believed they are closely associated with other deficiency states of the Vitamin B Complex. Almost a universal practice is to include Nicotinic Acid or Nicotinamide in Vitamin B Complex products and multi-vitamin preparations.

Nicotinamide Hydrochloride is a white crystalline powder with a strongly acid reaction. The latter characteristic offers advantage in some pharmaceutical preparations.

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(powder, micro crystal and Calcomites)
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Sulfabenzamide
(powder, micro crystal and Calcomites)
Sodium Sulfabenzamide
Aminoacetic Acid N.F.
Calcium Pantothenate (Dextro)
Choline Chloride
Choline Citrate, Tri
Choline Dihydrogen Citrate
Choline Bitartrate
Cinchophen N.F.
(and sodium salt)
Folic Acid
Neocinchophen U.S.P.
Methylene Blue U.S.P.
(powder and crystal)
Nicotinic Acid U.S.P.
Nicotinamide U.S.P.
Nicotinamide HCl
Para Aminosalicylic Acid
(and sodium salt)
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(regular and drench grades for veterinary use)
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TB-1
Certified Colors for Pharmaceutical Use

*In keeping with long-established policy, the above products are offered to ethical Pharmaceutical and Veterinary Manufacturers only.

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AMERICAN Cyanamid COMPANY

BOUND BROOK, N. J.

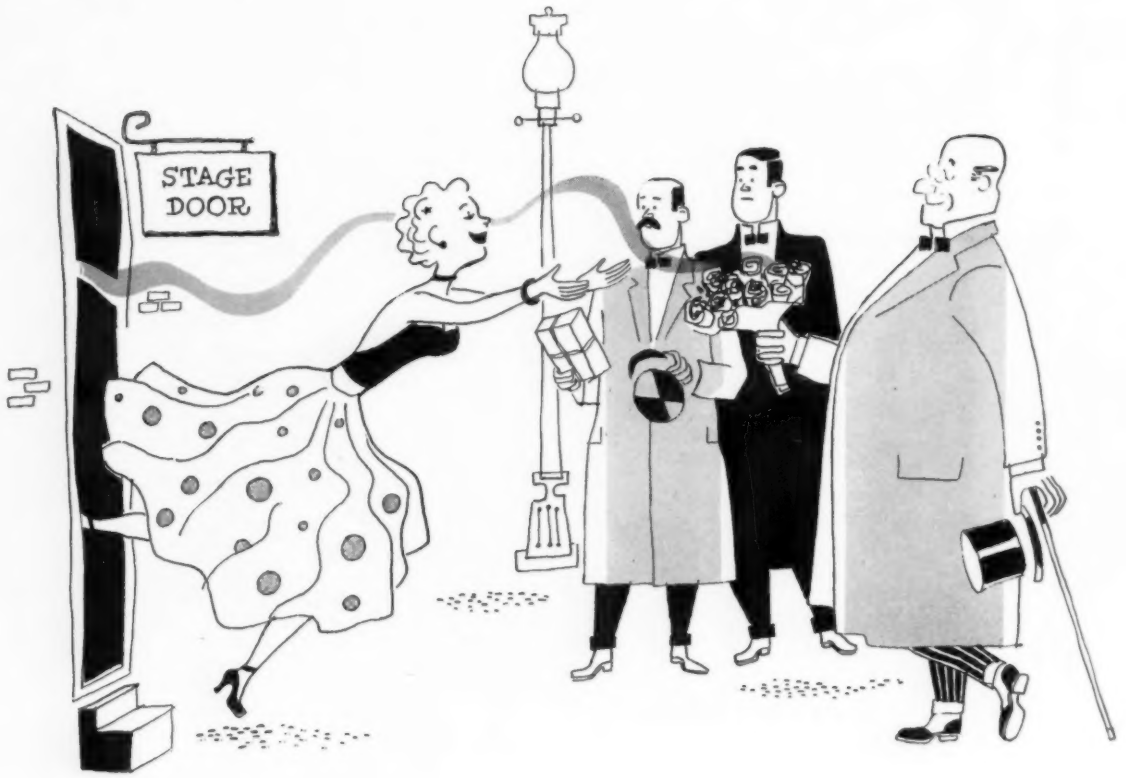
The Master's Touch

The Maestro knows the score. Skilled Perfumers do too! It takes creative know-how and long experience to produce correctly blended ingredients that will give your product a personality all its own and increase its sales potential. We have the experience, the facilities, and the master's touch to help you improve a product or create a new one. We welcome the opportunity to serve you.

Essential Oils
Aromatic Chemicals
Perfume Bases

POLAK'S *Frutal* WORKS, INC.

MIDDLETOWN, NEW YORK



The Way to a Woman's Heart...

OR HER PURSE . . . is the *right* fragrance for your product. Finding the answer to your perfuming problems is easy when you consult with our chemists at Naugatuck Aromatics.

They have a wealth of experience in Basic Perfume Materials and Aromatic Chemicals and they will be glad to work with you.

They can show you how to mask or denature unpleasant odors of raw materials. They can show you how to add a sales-stimulating fragrance—or a neutral tone—to your finished product.

Write, or call us—soon!

NAUGAROMES—For various industrial and commercial uses.

SOAPOLS—For bar, paste and liquid soaps.

SHAMPAROMES—For liquid, cream and paste shampoos.

MODERN BASES—For fine perfumes, colognes, toilet waters, toilet preparations, etc.

CREAMODORS—For all types of creams and lotions.

NAUGATUCK AROMATICS

DIVISION OF UNITED STATES RUBBER COMPANY

254 Fourth Avenue, New York 10, N. Y.— 701 South La Salle Street, Chicago 5, Ill.

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MANUFACTURERS OF AROMATIC CHEMICALS—IMPORTERS OF ESSENTIAL OILS

Methocel:

the Well Known Thickener

The outstanding advantage of Methocel (Dow Methylcellulose) as a thickener is that *so little will do so much.* In water, for instance, a three or four per cent solution of high viscosity Methocel is so thick that it will barely pour. Moreover, Methocel thickens uniformly, batch after batch.

This bland, physiologically inert, odorless, colorless, tasteless, stable material is highly useful—not only as a thickener—but also as an emulsion stabilizer, binder, film former and as a suspending agent.

In the cosmetic and drug industry, Methocel, a synthetic gum, is being used in the preparation of gumless lotions, leg makeup, hand and face creams, ointments, drug carrying films, surgical jellies, tablets, bulk laxatives, and in preparing emulsions of fatty, mineral and essential oils.

If you are looking for one material to serve many uses, get the facts about Methocel. Try the free, experimental sample of Methocel in the *new, powdered* form. Use the coupon below and we will send you the new leaflet "Methocel-Medical and Biological Applications" in addition to the free sample.

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

THE new *methocel*

DID YOU GET YOUR SAMPLE?

The Dow Chemical Company
Dept. ME-920 A Midland, Michigan

Please send free sample of METHOCEL, for use in _____
Check viscosity desired: 15, 25, 100, 400, 1500, 4000 cps.

Name and Title _____

Firm _____

Address _____

City _____ State _____

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CHEMICALS
INDISPENSABLE TO INDUSTRY AND AGRICULTURE

For creating the UNUSUAL NOTE *in perfumes and flavors*

PENICK *Offers . . .*

CALAMUS OIL — *CHAMOMILE OIL*
CASCARILLA OIL — *COSTUS OIL*
CANADA SNAKEROOT OIL

Adequate stocks available from our own distillation

Important also are these aromatic chemicals produced in our plant:

PHENYL ETHYL ALCOHOL — *EUGENOL*
PHENYL ETHYL ACETATE — *LINALOOL*
ALDEHYDES C-8 to C-22 — *LINALYL ACETATE*
CARVONE — *RHODINOL*

And many essential oils of our own distillation

CLOVE OIL U.S.P. — *CARAWAY OIL N.F.* — *GINGER OIL*
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Distillers of Rare and Quality Essential Oils — Manufacturers of Aromatic Chemicals.

90% monoglyceride content

MOST POTENT MONOGLYCERIDE EVER OFFERED!

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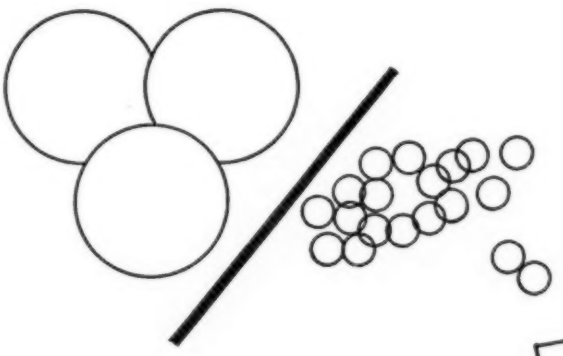

Two types available...

TYPE 18-85

A plastic fat made from refined cottonseed oil.

TYPE 18-05

A flaked solid glyceryl monostearate.

Send for samples

We'll be glad to send samples, specification sheet, and quotations. Write, wire, or phone.

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Charles Albert Smith, Ltd., Montreal and Toronto

"Myverol" is a trade-mark.

Distillers of Oil-Soluble Vitamins and Other Concentrates for Science and Industry; Manufacturers of High Vacuum Equipment

These qualities must be

PERFECTLY MATCHED

in a well-balanced perfume

BEAUTY... of immediate appeal

DIFFUSION... that property of a perfume to "reach out"

ODOR LIFE... a perfume should retain its character throughout its life

LASTING QUALITY... properly tuned to the creation

When developing your new creation, talk it over with those who know perfume

VAN AMERINGEN-HAEBLER, INC.

manufacturers and creators of the finest perfume materials

521 WEST 57th STREET, NEW YORK 19, N. Y.

A GREAT OAK . . .

LIKE THE PROVERBIAL OAK, Avon Allied Products, Inc. has its roots deep-down . . . nourished in the basic traditions of our industry. Firmly foundationed on the founder's ideals of integrity, sincerity and craftsmanship, the Company has flourished and matured into the largest manufactory of Private Brand Cosmetics in the world.

Today, Avon Allied's branches extend from coast to coast and into Canada to serve you more efficiently. Yet, its efficiency is never dissipated by over-eager attempts to serve a vast number of clients, lest the results fall short of the Company's purpose: To produce and assemble products built to the highest standard known to the American cosmetic industry.

When you are considering improving a product or creating a new one, it is good to know these things about Avon Allied. Take advantage of the opportunity to use the superior facilities and knowledge which Avon Allied's technical staff puts at your disposal: Men with a wealth of experience and specialized skills and the most modern scientific equipment that can be bought or developed.

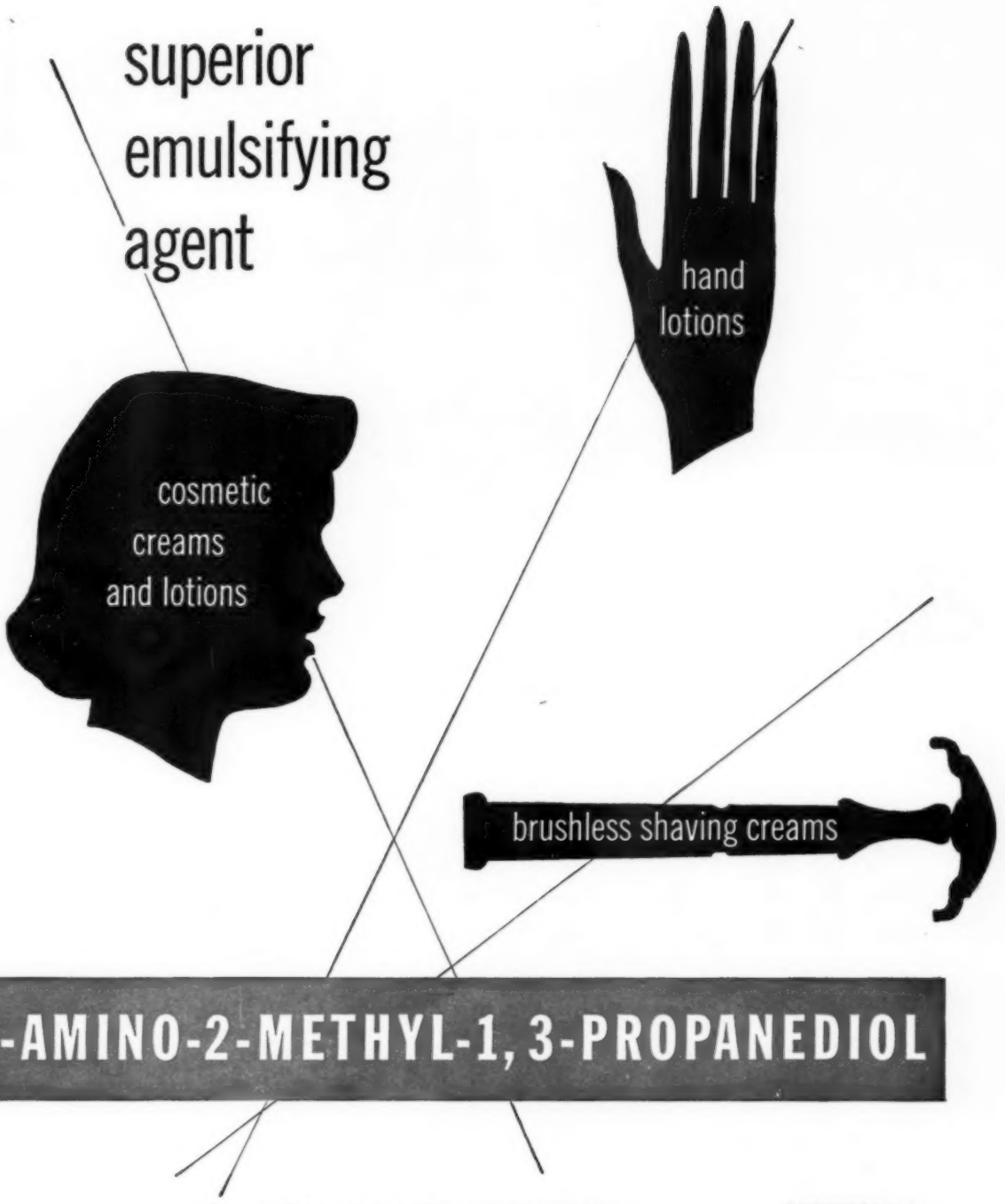
By utilizing Avon Allied's highly specialized service, developed during more than sixty years of successful operation, you too may confidently look forward to the fulfillment of your own long line of "Great Oaks."

Avon Allied Products INC.

Makers of the World's Finest Cosmetics • Private Brand Specialists

30 ROCKEFELLER PLAZA, NEW YORK 20, N.Y.

Plant and Laboratories: **SUFFERN, N.Y. • PASADENA, CALIFORNIA • MONTREAL, CANADA**



Soaps of this Aminohydroxy compound have unusually high emulsifying power and have no odor that will interfere with perfuming the final product. Creams formulated with AMPD soaps are remarkably free from oil "leakage". AMPD soaps are superior in stability of color and consistency, and in freedom from yellowing. Write, wire, or phone CSC for a sample and additional data.

PROPERTIES
of pure material

Molecular Weight	105.14
Melting Point, °C	109 to 111
Boiling Point, °C	151 to 152 at 10mm
pH of 0.1M Aqueous solution at 20°C	10.8
Solubility in Water g/100ml at 20°C	250

CSC

COMMERCIAL SOLVENTS CORPORATION • 17 E. 42nd STREET, NEW YORK 17, N. Y.

PRODUCTS OF THE INDUSTRIAL CHEMICAL DIVISION

Ethyl Alcohol & Derivatives • Acetone • Butanol & Derivatives • Formaldehyde • Methanol • Amines • Nitroparaffins • Crystalline Riboflavin

have you

considered

today's demand

for

solid cologne?

The vogue for Solid Cologne is increasing to a degree where the trend-conscious cosmetic and perfume manufacturer may well consider such a product for his line. Felton has pioneered in the development of special perfumes of exceptional effusion and unusual persistence — ideal for this type of product and offers you whole-hearted cooperation in the creation of a solid cologne for your line — from the stick, itself, to the most intriguing perfume for it.

For further details — simply write your name and address on the border of this ad and mail it to us today!

FELTON CHEMICAL COMPANY, INC.
599 Johnson Ave., Brooklyn 6, N.Y.

AROMATICS • PERFUME BASES • ESSENTIAL OILS

ATLANTA BOSTON BROOKLYN CHICAGO DENVER FT. WORTH LOS ANGELES
MONTREAL PARIS PHILADELPHIA SALT LAKE CITY SANDUSKY SAN FRANCISCO
ST. LOUIS TOLEDO TORONTO VANCOUVER WINNIPEG

3 VITAL POINTS *for fast delivery!*

LOS ANGELES 1, CALIF. **CHICAGO 10, ILL.** **JERSEY CITY, N. J.**

NYQ SYNTHETIC VITAMINS

REG. U.S. PAT. OFF.

Complete stocks at Jersey City, Chicago and Los Angeles are your assurance of fast delivery when you specify these N.Y.Q. SYNTHETIC VITAMINS:

VITAMIN A ACETATE
VITAMIN A PALMITATE
ACID NICOTINIC U.S.P. (Niacin)
ACID NICOTINAMIDE U.S.P. (Niacinamide)
ACID ASCORBIC U.S.P. (Vitamin C)
ACID ASCORBIC U.S.P.
Special for Ampul Use (Vitamin C Special)
ALPHA TOCOPHEROL PLAIN (Vitamin E Plain)
ALPHA TOCOPHEROL ACETATE (Vitamin E Acetate)
CALCIUM PANTOTHENATE DEXTROROTATORY
PYRIDOXINE HYDROCHLORIDE (Vitamin B_6)
RIBOFLAVIN U.S.P. (Vitamin B_2)
RIBOFLAVIN SOL (Vitamin B_2 Sol)
SODIUM ASCORBATE
THIAMINE HYDROCHLORIDE U.S.P. (Vitamin B_1)
THIAMINE HYDROCHLORIDE
Special for Ampul Use (Vitamin B_1 Special)
VITAMIN B_{12} CRYSTALLINE
VITAMIN B_{12} 0.1% TRITURATION

As with every fine N.Y.Q. chemical, each of these vitamins will meet your most rigid requirements for uniform purity, potency and stability—and *economy!*

For samples, prices and detailed information, check the N.Y.Q. office nearest you.

NYQ REG. U.S. PAT. OFF.

The Full Line Fine Chemical House

The NEW YORK QUININE & CHEMICAL WORKS, Inc.

GENERAL OFFICES: **99 NORTH ELEVENTH STREET • BROOKLYN 11, N. Y.**
729 West Division Street, Chicago 10, Illinois
718 East Sixtieth St., Los Angeles 1, California

Wanted:

I want a job selling perfumes and cosmetics.

I know the cities and towns where these products are sold in worthwhile volume, where all the capable, energetic retail sellers of cosmetics are located, and where the sales expense of calling will return a profit.

When I enter the store of any of these retailers, I am sure of a welcome based on long, friendly associations. I know the folks who do the buying; more important I know the folks who do the selling. I know how to get the attention of these folks, how to get my story over without stepping on anyone's toes.

I want to do more than just send you an order which would only mean that your goods are at rest in that store. I like to sell and my idea of selling is to keep your goods moving through the store to Miss and Mrs. Public.

I would expect you to give me a clear, concise story of your product—its quality, competitive advantages and selling points. I would need to know your advertising program, so that I can build up in the mind of these retail folks the expectation of substantial consumer interest. I want also to know about your company policies so that I can win friendly admiration for your products and your company.

I can sell perfumes and cosmetics because I know the people who in turn sell them to the public.

Let me carry the kind of message which encourages retail display for your product and friendly, informed selling behind the counter and you will soon see results in increased retail orders.

I have been selling perfumes and cosmetics for over 33 years. Any good retailer will give you a reference.

My name is BEAUTY FASHION:

Do you need a top-notch, tested, retail salesman?

"I want a good inexpensive, odorless, non-allergic, all-purpose cream that isn't greasy."

KEEPING POSTED

Therapeutic Research Reports

FIVE literature surveys have been completed by the Therapeutic Research Foundation, and six new studies are under way, reports Dr. F. J. Cullen, secretary and treasurer. The first three of the completed surveys on papain, hydrastis, and the pharmacology of boric acid and boron compounds, have been already published in scientific publications, while the other two studies on anti-bacterial action of boric compounds, and on stramonium cigarettes and powders are scheduled for publication in the Bulletin of the National Formulary Committee.

The six new studies, five of which are well under way are: 1. A literature survey on viburnum by Dr. R. A. Woodbury of the University of Tennessee; 2. a cooperative study on boric acid by Dr. Milan Navak of the University of Illinois; 3. a cooperative study on bitter tonics by Dr. Franz R. Goetzl of the Permamente Foundation of Oakland, Calif., and Dr. McKeen Cattell of Cornell University Medical College; 4. a study to determine the germicidal, antiseptic and fungicidal properties of certain substances; 5. a study on the values of antihistamincis, individually and combined with other drugs, in relief of hay fever and colds; 6. a study of various combinations of drugs to determine their value in the relief of menstrual pains and discomforts at the time of change of life. The last three of these studies are sponsored by individual companies and therefore the specific drugs under study are confidential at this time, said Dr. Cullen.

F.T.C. Order Against Vitamins and Minerals

OF PARTICULAR interest is Cease and Desist Order 5666 of the Federal Trade Commission which was issued against the distributor of a preparation containing vitamins and minerals. The order says in part:

". . . also requires—to discontinue representing without qualification that—is a competent or effective treatment for, or will cure, headaches, nervousness, or dizzy spells; restore vitality, energy, or weakened sexual powers; improve appetite or increase weight; enrich or build the blood; or correct dullness, tiredness, lack of ambition to work or play, or similar symptoms and conditions.

"These representations are prohibited unless they are 'expressly limited to those conditions in which the symptoms and conditions to be treated are due solely to iron deficiency resulting from an inadequate intake of iron in the diet;' and unless the advertisements disclose that 'such of the aforesaid symptoms and conditions to which the statements thereof may relate are caused less frequently by anemia due to a simple deficiency of iron in the diet than by other causes and that when such symptoms and conditions are due to other causes this preparation will not be effective in relieving or correcting them.' (Commissioner Lowell B. Mason did not concur in the qualifying disclosure provisions of this part of the order.)

"In concluding that certain advertisements disseminated by—were false and deceptive, the Commission said that, as in other cases presented to it for determination, it had 'taken into consideration the innuendoes and suggestions contained in the advertising.'

" 'In such advertisements,' the Commission said, 'the product is offered for the correction or cure of designated symptoms or conditions. It will be of benefit, however, only in that extremely small percentage of instances where the symptoms stem from anemia due to a deficiency of iron in the diet. Obviously, the causes of such symptoms or conditions are so numerous that their mere existence creates no reasonable likelihood that they will be benefited by respondent's preparation. In representing the product as an effective treatment for the symptoms enumerated, respondent suggests not only that they may be due to the cause for which the product is beneficial, but also that there is a likelihood that they are in fact due to such cause.

" 'If such a representation be made in a categorical statement and if in the majority of cases the symptoms

or conditions are due to causes in the treatment of which the product advertised will have no benefit whatsoever, the representation is false and clearly deceptive. A representation to the same effect made under the same circumstances except by suggestion instead of categorically and unaccompanied, as in the present case, by an appropriate disclosure of the likelihood of other causes of the symptoms or the conditions, is equally false and by reason of such falsity is subject to the exercise of the Commission's corrective action in the same manner and to the same extent as though the representation were made by affirmative statement.'

"The Commission's order to cease and desist also prohibits—from representing that any specified percentage of persons are suffering from nutritional mineral-iron anemia unless such statement is based on authoritative and reliable medical statistics; that—will restore health to all persons suffering from ill health; that the preparation does not contain drugs or that it influences health without the use of drugs; and that it contains the same minerals in the therapeutic amounts that are found in the waters of well-known mineral springs."

In this Order, the Commission has disregarded the recent court decision in the case of the F.T.C. vs. Alberty in which the Court stated that it was not necessary for the advertiser to include statements in advertising to the effect that the product may not be of value under certain circumstances.

Parenteral Closure Committee

THE Materials Division of the Packaging Institute has created a new committee entitled the Committee on Parenteral Closures, which is the outcome of a conference held last May to discuss a plan to secure greater uniformity and satisfaction with parenteral stoppers. Eight companies represented by fourteen men attended the conference but other manufacturers who had not been represented were subsequently given the opportunity to share their methods and experience in return for a copy of the final report of the conference. Decision was reached to set up a technical committee in the Institute to study the problems of parenteral closures and to hold further meetings of the group alone, and later on with stopper manufacturers, to try to solve mutual problems by joint effort and cooperation with suppliers.

J. A. Elder of Merck & Co., is chairman of the Parenteral Closure Committee, and other members are C. B. Burnside, Eli Lilly & Co.; P. Van Gieson, Lederle Laboratories; and D. Seif, E. R. Squibb & Sons.

Antibiotic Elixir

TERRAMYCIN, the specialty antibiotic of Chas. Pfizer & Co., is now available in elixir form, being the first of the antibiotics to be prepared in this manner. It is now being released to physicians under the trade name, Terrabon. The elixir was made feasible by terramycin's solubility, unique among broad-spectrum antibiotics, and by its stability in solution. Each teaspoonful of the cherry-mint flavored elixir contains 250 mg. of terramycin, the equivalent of one of the regular 250 mg. capsules. The administration in elixir form is particularly recommended for the treatment of pediatric and geriatric patients, and for those who experience difficulty in taking the customary forms of oral antibiotic medication. The new Terrabon is delivered to druggists in a combination package consisting of a vial containing 1.5 grams of terramycin, and a bottle containing 1 fluid ounce of a specially flavored and buffered diluent. When compounded, the terramycin elixir can be stored for at least two weeks at room temperature without appreciable loss of potency. Terramycin itself, at room temperature, maintains its potency for at least a year.

British Health Plan Two Years Old

ON PASSING its second birthday, reports with regard to the British Health Services Act (socialized medicine to you) are to the effect that the system is costing the British people three times more than they were told to expect, the cost being $1,229,600,000. It is said that the average doctor in Great Britain has a net income of $4,284 a year, and that less than ten per cent of the cost of the medical care plan goes into doctors' fees. It is reported that a number of doctors are threatening to withdraw en masse because they are underpaid. It is also said that some of the druggists consider themselves underpaid, even though the cost of medicine per patient has risen to $2.04 for 1949, against only 96 cents for 1948. British country doctors who have traditionally acted as their own pharmacists have discovered they can pick up some extra money by filling their own prescriptions.

Many of the laity are disgruntled because the care of children and their teeth is being neglected, as frequently it is necessary to wait as long as three or four months to get the type of service desired. The only way to get the required service seems to be to pay the doctor or dentist a fee over and above that which the Government pays him in order to obtain more prompt attention. It is said that when one doctor walked into his office and found forty patients were in the waiting room, he asked all who did not require immediate medical attention to come back at another time since he had an emergency case. They all walked out.

Ewing Plan Set Back

GOVERNMENT control of medicine in this country received a significant kick-in-the-pants last month when the House of Representatives, by a vote of 249 to 71, rejected Reorganization Plan No. 27 which would set up a Health, Education and Security Department with a Cabinet officer as its head. On the same day the Senate Expenditures Committee voted against the proposal by a vote of 6 to 3, but since the plan had already been rejected by the House, further consideration by the Senate was not taken.

The debate in the House was interesting. Congressman Halleck of Indiana stated in a speech, "Your vote will put you on record for or against socialized medicine." Representative Hoffman of Michigan said that such a Cabinet Post would "put doctors under the direction of a master politician." Congressman Wingate Lucas of Texas stated that the program seemed designed to give more power to Ewing, and, "Why," he demanded, "should we give more power to the man we do not trust?"

It appears that any attempt on the part of the President to further any medical project in combination with Federal Security Administrator Oscar R. Ewing is doomed if Congress has to approve it.

Modern Medicine Show

THE medicine show of old is being modernized by Senator Dudley J. LeBlanc, Lafayette, Louisiana, owner of "Hadicol," the vitamin and mineral preparation, which is now claimed to be selling at the rate of $2,000,000 per month. Senator LeBlanc is spending $250,000 on what he calls a good-will tour of the Mid-South beginning August 21 and ending September 4. He will take 100 brightly-painted Hadicol trucks with him, on the tour, which will carry $1,000,000 worth of merchandise to be delivered en route.

"Mickey Rooney, Connie Boswell, Roy Acuff, Minnie Pearl, Sharkey's Dixieland Band, and more than 30 other great headliner acts from Hollywood, radio and stage will accompany Senator LeBlanc," the announcement reads. "He will carry 10 circus clowns with him, as well as a mama elephant and her baby. He has purchased a new calliope to lead the pre-show parades, and is still contacting many name acts.

"The Hadicol Good-Will Tour will be a colorful affair, booked as 'the world's greatest show on wheels.' Auditoriums and baseball parks have been taken over in 15 leading cities, to stage the Hadicol Good-Will Show, with one Hadicol box top being the only admission charge.

"The saturation advertising is so heavy that this Hadicol Good-Will Tour will undoubtedly be regarded as the greatest merchandising promotion to be carried out in the history of the South. A minimum of 7,500 lines of advertising is being prepared for all dailies in the 15 key cities, in addition to the regular heavy schedules now running. Smaller schedules will be sent to about 250 dailies and weeklies along the route and within 50 miles of the key show cities. A minimum of 30 radio spots are being used, daily, in key cities, in addition to the regular heavy schedule of spots and programs. Television shows are being lined up in cities having such facilities."

Screw Cap Study

A STUDY of the special problems connected with screw cap closures for drugs and pharmaceuticals has been distributed to the interested members of the Packaging Institute, according to H. Earl Nack of Sharp & Dohme, chairman of the Institute's Drug and Pharmaceutical Packaging Development Committee. Carl B. Burnside of Eli Lilly & Company was in active charge of the study in which 34 companies participated.

For volatile liquids the report shows that Vinylite is the most popular facing, closures of Foil, Saran and Pliofilm being the second choices. Foil, however, takes first place where special closures are used for chloroform containing liquids but, oddly enough, some concerns feel that no special precautions are needed. Where volatile oils, essential oils and organic solvents are packaged, foil is again the first choice for a liner facing.

While corrosion of metal caps is always a problem, no one reported any comparable difficulties with molded plastic screw caps. Eight different types of special closures were used by seventeen different companies for antibiotics and similar hygroscopic dry materials, with the majority exercising considerable control over screw cap application and torque.

Moisture vapor transfer data pertaining to liner facing was used by the majority of the companies reporting on this phase of the problem but most users rely on the cap manufacturer's data instead of measuring it in their own laboratories.

In spite of the functional need for high resilience of cap liners, upward of 80 per cent of the users do no testing of cork or pulp liners, but those who make such tests are very exacting in their requirements. Testing of the breakage strength of plastic closures, by hand and by machine, and the frequency of such tests is indicative of a trend toward greater care in this field.

An interesting aspect of the report is the survey of the methods and duration of tests of new closures, for some tests run as long as eight to twelve weeks under accelerating conditions or one year under room conditions.

Copies of the complete report are available from the Packaging Institute for $1.50 a copy. The Institute is located at 342 Madison Ave., New York 17.

Now Nineteen Oldest Drug Houses

OUR list of the oldest drug houses, which started with eight in our issue of December, 1949, and had doubled by the time our June, 1950 issue was published, has now increased to nineteen. On a quiet evening at home, Herb Stratte of Strong Cobb & Co. called us to call to our attention that his company was founded in 1833. A phone call to our office from a descendant of the original McKesson family informed us that McKesson & Robbins also dates back to 1833. Then a letter from Jerome Harris tells us that William R. Warner & Co. had its beginning as a small laboratory in 1856, which lands them in tenth place, while McKesson & Robbins & Strong Cobb are tied for fourth place.

Still starting with Schieffelin and ending with Eli Lilly, the *nineteen* oldest drug houses in this country are:

Schieffelin & Company	1781
The Tilden Company	1824
The Wm. S. Merrell Company	1828
McKesson & Robbins	1833
Strong Cobb & Co.	1833
Otis Clapp & Son	1840
Smith, Kline & French	1841
Carroll Dunham Smith Pharmacal Co.	1844
Sharp & Dohme	1845
William R. Warner & Co.	1856
E. R. Squibb & Sons	1858
Reed & Carnrick	1860
Wyeth, Inc.	1860
The Burroughs Bros. Mfg. Co.	1863
Buffington's	1865
Parke, Davis & Company	1866
Henry K. Wampole & Co.	1872
The Maltine Company	1875
Eli Lilly & Company	1876

F.T.C. Board of Review

THE Federal Trade Commission now has a committee studying the feasibility of establishing a procedure within the Commission whereby an advertiser may obtain a preliminary review of his advertising claims and copy by the Commission prior to publication in order to avoid letter action by the Commission. An advertising board of review within the Commission to inspect proposed advertising at the request of an advertiser would be in line with the Commission's expressed desire to expand its cooperative effort with industry by supplementing existing law enforcement through educational programs designed to effect voluntary compliance with the laws prohibiting false and misleading advertising and deceptive practices.

Proposed Patent Law

PRACTICALLY all of the controversial changes proposed to be made in the new patent law (H. R. 9133, introduced by Representative Joseph R. Bryson, South Carolina) which has been before a house subcommittee for the past six months. The latest draft, bearing the above number, is said to represent the latest agreements of the various interests working with the subcommittee, and it has been introduced for the purpose of obtaining further opinions from the affected industries. Active consideration of the Bill will not take place until the next session of Congress.

Three principal sections in controversy were contained in the Bill as introduced last January. These were concerned with the conditions which the owner of a patent could impose when granting licenses under a patent; the recording of patent license agreements in the patent office; and compulsory licensing of patents under certain conditions. Drug manufacturers were principally concerned over the compulsory licensing provisions because they specifically provided for compulsory licensing of patents considered essential for public health or safety. This section of the Bill would also have required the licensing of patents considered by the Patent Commissioner as being purposely withheld from the public or not being used to an extent sufficient to meet existing demand.

An important broadening effect on the patentability of inventions will result from one change in the Bill. This is to define the term "art" to include a "new use of a known material." This change, of great import to the drug and chemical manufacturers, will permit patents to be obtained on a new use for a known material.

Drugs in Grocery Stores

WRIGLEY Stores, Inc., Detroit, convicted on two counts by a jury on May 27, 1948, in the sale of drug products in its grocery stores, have, upon appeal, obtained a reversal of the conviction. The charges against Wrigley were: Selling drugs without a license, and selling drugs in a store without a pharmacist in charge. The charge was brought under the pharmacy law of 1885, as amended. The sales were admitted, as was the charge that there existed no license or pharmacist. Articles admittedly sold were packaged brands of milk of magnesia, ammonia alum, and boric acid. Section 18 of the pharmacy act exempts from licensing sale of certain specified items. It also exempts the sale of patent and proprietary medicines and permits the sale of certain drugs, properly packaged in communities where there are no pharmacists for five miles.

The court stated: "It would seem to this court that to limit the sale of ordinary packaged household remedies to pharmacies is unreasonable and tends to create a monopoly without resulting protection to the buying public. The customer is no safer if he buys these from a druggist than from a grocer. . . . On the question of what are patent and proprietary remedies, authorities are divided. There are no Michigan decisions. Many jurisdictions adopt the theory that the popular use of the term applies even though the patent for the secret formula has expired. . . . This court prefers that interpretation and finds affirmatively that the items sold *are* ordinary household remedies, and also patent and proprietary medicines in the popular sense. . . . Unless an act of the legislature under the state police power is a reasonable exercise of state authority, it is invalid. The court does not find this act invalid, reasonably construed. A reasonable construction, in the court's opinion, includes all ordinary and domestic remedies under the exception of Section 18 of Act 134, as interpreted by Act 359 of 1927. Such construction further exempts the items sold as patent and proprietary medicines as those terms are popularly used. Under this construction the statute is constitutional. And under this construction defendant is entitled to have the judgment and sentence vacated and set aside."

Fair Trade in Florida

THE decision of Circuit Court Judge Victor O. Wehle declaring Florida's voluntary fair trade law unconstitutional will be appealed to the state's Supreme Court by Seagram Distillers. The court held the law invalid on June 26 in a case brought by the liquor company against Ben Green, Inc., a St. Petersburg retailer, for violation of a fair trade price contract. Only two Florida counties were affected by the ruling with fair trade contracts being still legal in the balance of the state.

The highest courts of sixteen states have upheld the fair trade acts of those states, the Bureau of Education on Fair Trade points out, the Florida State Supreme Court being the only high court which has ever declared a state fair trade law unconstitutional. When this court ruled against the state fair trade law in the spring of 1949, the State Legislature passed a revised fair trade designed to meet the objections of the court. It is this revised act that will come up for review in the Seagram appeal.

It is said the complexion of the Florida Supreme Court has been changed considerably since it rendered its adverse decision a little over a year ago. The Circuit Court's ruling is said to be remarkable "for its announced bias against fair trade, for its obvious misconceptions about the way fair trade works, and for its open disregard for the intent of the State Legislature in passing the revised act.

Medical Books Not Evidence

IN AN APPEAL by the Food and Drug Administration to the Circuit Court of Appeals in which the Court reversed a District Court decision and ruled in favor of the government in condemning misbranded colonic irrigation devices, the Court had the following to say with respect to the admissibility of medical evidence:

"While the authorities are not in complete accord, the weight of authority is that medical books and treatises are not admissible to prove statements therein contained. The trial court erred in admitting and receiving in evidence excerpts from these books offered by the defendants for the purpose of establishing the truth of the statements contained therein.

"While the trial court did not exclude the testimony of the five medical experts offered by the government, it was of the apparent opinion that their testimony was entitled to no consideration because they had neither tested the device in question nor had they observed it in operation.

"That these medical experts were competent and qualified to testify as to matters in issue is clear. They were not disqualified merely because they had not used the device in question or had not seen it in operation. They testified not only that they were conversant

with colonic irrigation, but also that they were familiar with the principles of the particular device in question. . . . The testimony of these medical experts was competent and constituted substantial evidence.

New H. I. F. Board

THE Health Information Foundation is getting under way three health research studies undertaken by the University of Chicago, the University of Pennsylvania, and the American Hospital Association. Representatives of these institutions recently were called together by Admiral W. H. Blandy to exchange views on the projects which are still in the study and planning stages.

Dr. Clyde W. Hart, director of the National Opinion Research Center affiliated with the University of Chicago, outlined a proposed four-point study which his group will undertake. George Bugbee, executive director of the American Hospital Association, outlined plans for a national study of hospital care.

A new board of directors has been chosen to replace the organizing board of last February. Twenty-nine executives from the drug and allied fields were named to serve on the board. They are:

L. D. Barney, president, Hoffmann-La Roche; Walter Beardlsey, president, Miles Laboratories; Francis Boyer, president, Smith, Kline & French Laboratories; Lee H. Bristol, president, Bristol-Myers Co.; Alvin H. Brush, chairman of the board, American Home Products Corporation; Dr. Robert H. Cutter, president, Cutter Laboratories; John W. Dargavel, executive secretary, National Association of Retail Druggists; W. L. Dempsey, president, Sharp & Dohme; F. S. Dickinson, president, Becton, Dickinson & Co.; Howard B. Fonda, senior vice-president, Burroughs, Wellcome Company; Leslie Harrop, vice-president, the Upjohn Company; James Hill Jr., chairman of the board, Sterling Drug; James J. Kerrigan, president, Merck & Co.; A. W. Leschohier, president, Parke, Davis & Co.; W. G. Malcolm, president, Lederle Laboratories; Foster G. McGaw, president, American Hospital Supply Co.; John E. McKeen, president, Chas. Pfizer & Co.; Dr. E. L. Newcomb, executive vice-president, National Wholesale Druggists Association; Carleton H. Palmer, chairman of the board, E. R. Squibb & Sons; S. B. Penick Sr., chairman of the board, S. B. Penick & Co.; Earl S. Retter, vice-president, Eli Lilly & Co.; Merle Sanders, president, Snyder's Drug Stores; John G. Searle, president, G. D. Searle & Co.; George F. Smith, president, Johnson & Johnson; Dr. Franklin Bliss Snyder, president-emeritus, Northwestern University; Faus J. Solon, vice-president, Owens-Illinois Glass Co.; George Van Gorder, president, McKesson & Robbins; Ernest Volwiler, president, Abbott Laboratories; E. T. T. Williams, president, Lambert Pharmacal Co.

No Injunction When Cause is Removed

IN A RECENT case in which the District Court refused a government request that it enjoin and restrain a manufacturer from interstate shipment of various drugs alleged to be adulterated and misbranded, the Court stated:

"However, in my opinion, a preliminary injunction should not issue unless the government makes out a case where there is a strong probability that the respondent's allegedly illegal acts will continue in the future. In the instant case, the complaint was filed on February 26, 1948, more than three months after the last alleged violation of the Act, and almost five months after the last inspection of respondent's premises by the government agents. In the light of the affadavits presented by the respondent containing statements that the causes for any possible violations have been eliminated, and in the absence of any evidence of recent violations, there is not sufficient evidence of the probability of any future violations to warrant the issuance of a preliminary injunction as prayed for."

Best Financial Reports

SEVENTEEN manufacturers in this industry have qualified for "Highest Merit Award" citations for their annual reports, almost 5,000 of which were submitted in the tenth annual survey conducted by Financial World. These companies are:

Abbott Laboratories	Norwich Pharmacal Co.
Avon Allied Products	Parke, Davis & Co.
Bristol-Myers Company	Plough, Inc.
Colgate-Palmolive-Peet Co.	Sharp & Dohme
Johnson & Johnson	E. R. Squibb & Sons
Lambert Pharmacal Co.	Sterling Drug
Lehn & Fink	Vick Chemical Co.
McKesson & Robbins	Zonite Products
Merck & Co.	

The stockholder reports of these companies have thus become candidates for the final judging, and one will be selected for a "Best of Industry" award and presented with a bronze "Oscar of Industry" at the Financial World Annual Reports Banquet, to be held October 30, at Hotel Statler, New York. Bristol-Myers was the winner last year.

Dental Care Insurance Plan

A VOLUNTARY insurance plan for dental care—the first in this country—was launched last month for the boroughs of Manhattan and Bronx, of New York City, when the First District Dental Society, whose members practice in these two boroughs, voted by five to one to endorse the plan offered by Group Health Dental Insurance, Inc., 120 Wall St., New York. The plan, as described by Dr. Oscar Jacobson, president of the Society, offers complete dental care for families with incomes of less than $5,000 a year at a cost of $72 a year. This premium applies to a family of three or more, families of two persons paying $39.50, and individuals $19.80. Each subscriber will be expected to pay for the correction of dental defects existing at the time the insurance period begins, this payment being made at a favorable fee. The insurance plan will pay all fees for initial treatments above $150 per person.

With families having annual incomes over $5,000 the plan will pay only part of the cost of dental care and the subscriber will pay the balance. Regardless of family income, the plan will pay for initial corrective services if the cost is over $150.

As there is at present no sound actuarial basis for calculating the cost of dental care under an insurance plan, the plan will be limited to a two-year period and to 25,000 subscribers in its present form. It will be available to the public in about six months. During the test period, subscribers will be accepted in employee groups only. Business organizations with sixty or more employees, at least 75 per cent of whom enroll, will be eligible. This is to avoid a poor selection of risks. The dental insurance will be conducted under a management contract with Group Health Insurance, Inc., a voluntary medical insurance organization with 80,000 subscribers and 3,000 participating physicians.

WHY NEW PRODUCT PROGRAMS FAIL

By Tom Smith

Editor's Note:
Tom Smith, which is not the author's real name, is an advertising man with extensive experience in the drug and cosmetic fields. On a recent visit to New York, and in the course of a purely social luncheon, he discussed with the Editor some aspects of the New Products problems that are not commonly brought into the open. He was persuaded to put his thoughts on paper, and this article is the result. The incidents related are fictitious, and no connection with specific companies or people is intended.

THREE years ago a young friend of mine accepted a job in the Sales Department of a well-known company in the proprietary field. Until receiving a letter from him several weeks ago, asking if I knew of an opening in some other organization, I had presumed he was quite satisfied with his work and progress.

His letter stated that, after his first year with the company, he was transferred to a newly conceived department—the Idea and Development Department—which was set up to find and market-test products that might have enough potential to be added to the regular line.

Although initially delighted with this assignment, my friend reports that over the next two years his happiness had turned to despair. The program of which he was part had bogged down in a hopeless series of personal conflicts, confused direction and waste of effort. His letter reads, in part:

> "I used to wonder what was so damn hard about getting out new products—assuming you had the men and money. Now I see that there's more to it than meets the eye—including futility, frustration and fratricide."

Having written my young friend a few consoling thoughts, I started canvassing various other companies in his behalf. His letter made me think of other and similar situations I have seen in the past, and it saddened me to realize that the same old mistakes are being repeated again and again.

Why is it that the larger companies in our industry haven't introduced a really new consumer product in the last fifteen years? How does it happen that home permanents, anti-histamines and ammoniated dentifrices, for example, were pioneered by concerns that were relative newcomers to these fields?

There are many answers to this question, some of which have a taste slightly reminiscent of sour grapes, and no one of which is complete in itself. Purely as a matter of useful speculation, and for a reason that will be more clearly defined later, I am going to list a few of the conditions that impede development of new proprietary drug products, and that help explain such situations as described in the letter just quoted.

* * * *

It is probable that many of today's leading proprietaries would never have reached the market had their original owners followed the introductory methods that are now routine. These products were developed by men whose children would have been forced to go barefoot had their efforts failed. But they were not afraid to take a chance.

The individual entrepreneur of the past has been replaced today by a group whose names or titles he would hardly recognize: Product Manager, Technical Director, Account Executive, Plans Board, Clinical Director, Market Research Chief, etc. One of the main objectives of this group is to *avoid* taking a chance . . . at least, one that's too clear-cut.

It must be quickly said that marketing a new product today is a far more complex matter than at any previous period. "Time renders ancient good uncouth," and we have a sense of social responsibility that, without being thought deficient, our predecessors lacked. The various regulatory agencies are ready to remind us of these responsibilities should we forget them. It would be foolish to deny that the shadow of punitive legal action looms over our developmental work and sometimes makes us plod where we would run.

On the other hand, however soothing to our own self-esteem, the poor old much-abused bureaucrat cannot be assigned full responsibility for the indecision and delay that characterize most of our developmental efforts. The fault, dear Brutus, is in ourselves.

And it arises chiefly from two things: (1) lack of clearly defined objectives and, (2) fear of failure.

At its simplest, a New Products program can consist of a few people who—in addition to their regular duties—are on the lookout for items to supplement the present

line. In order to broaden our base of observation, let us consider a full scale operation, the usual course of which is about like this: First, Management decides that there should be greater diversity of sales and profits. Next, a group is appointed to make a study, which covers potential fields of expansion, concludes that great opportunities exist, and examines possible forms of organization for the new division. After considering what other companies have done in this matter, the group decides that "our problem is different," and, disregarding the experience of previous navigators, sets out to discover America all over again. As a start, they choose as head of the New Products Department an executive who has made a fine name for himself as Comptroller.

In some cases, various departments of the company are called on to contribute the required personnel for the program. In other cases, the placement agency is advised of the urgent need for six Product Managers, and the Laboratory staff is immediately tripled in anticipation of Big Things to Come. In any case, the fun begins.

Ideas for new products are the first order of business. The President starts the ball rolling with two rather general suggestions—"A really antiseptic toothpaste that fizzes," and, "A female tonic that combines vitamins, minerals, sex hormones and a gentle laxative action in an alcohol base." These are put at the top of the Active List forthwith.

The chemists are all requested to turn in their recommendations, and though great things are expected, it turns out that, as a group, chemists don't have a real promotional flair. Their ideas are not daring enough, and they have no sense of the importance of time—each one appears to think that the company can wait six months for the completion of stability tests, or special clinical work.

The salesmen, from whom much had also been expected, turn in a very ragged performance. One of them sends in three jars of an acne remedy from Virginia, reputedly made from a mud deposit along the Rappahannock River, and said to be sold by the gross in one drug store in Leesburg. There is considerable hope that this is really it. The chemists' report, however, shows the product to be a commonly used sulphur ointment, colored with a little black dye. Other than this one tangible suggestion, the salesmen seem to feel that the line is about all right as it is.

When all is said and done, the advertising people show up best. There are at least five really promising suggestions from the group as a whole, all accompanied by introductory newspaper ads that illustrate how the product stories can be handled. Several good names are proposed and in one case there is an idea for a Magic Ingredient ("like Irium") that sounds terrific. The chemists, again, seem to want to throw cold water on these suggestions but, when the dust settles, three are on the Active Slate, so that with the two from the President, there are five "promising" proposals for immediate development. (The Reserve Slate, composed of ideas to be taken up later, has now grown to an imposing list of some 43 different projects.)

The President receives monthly reports from the Vice-President in charge of New Products, and during the early period these are devoted largely to problems of space and personnel, with optimistic predictions of future progress once these are solved. However, as time passes and actual product work begins, the reports reflect some of the perils and disappointments that await explorers who venture into new and strange lands. "We had expected to begin consumer jury tests of formula 1123-A this week, but the Laboratory has just detected the presence of worms in an early sample, and wants to run further analyses before we go ahead." Or, "Dr. Barkenlooper has run patch tests on formula 1345-C for our new drug application, and reports slight erythema. Tests to be repeated next month with lower concentration of active ingredient using same subjects, if they can be persuaded to cooperate."

As the first year of the new program comes to an end, for reasons any sensible person can readily understand, the New Products Department is not yet ready to conduct market tests. Privately, however, the President is beginning to tap his foot, and the Sales Department, somewhat miffed ever since the episode of the acne remedy, is already predicting an end to the whole program and an early return to sound, basic thinking. The atmosphere is definitely not too friendly, and the New Products people begin to realize, or rather feel, that once they stop buzzing around and light somewhere, the men with the fly-swatters are going to get them. Activity intensifies as apprehension increases.

Every day there are long conferences. The cap on the package is to be a lighter shade of green. The

(*Continued on page 260*)

THE PRESCRIPTION LEGEND

THE question of whether or not a drug product should be marketed for over-the-counter sale or only on prescription still constitutes a point of difference between the pharmaceutical manufacturers and the Food and Drug Administration. Under the Food, Drug and Cosmetic Act, the choice of manner of sale is left entirely to the manufacturer. He can restrict the sale of his product to prescriptions merely by stating on his label that sale is so restricted. In this case he does not have to include directions for use in his labeling.

However, the retail druggists are far from satisfied with this state of affairs, since many of the drug preparations now bearing the prescription label are absolutely harmless and are perfectly safe for over-the-counter sale. If retailers sell one of these perfectly harmless preparations over-the-counter when it bears the prescription legend, they are technically breaking the law. For this reason, about 1943, John W. Dargavel, secretary of the National Association of Retail Druggists urged the Food and Drug Administration to correct this situation in the interests of the retail druggists.

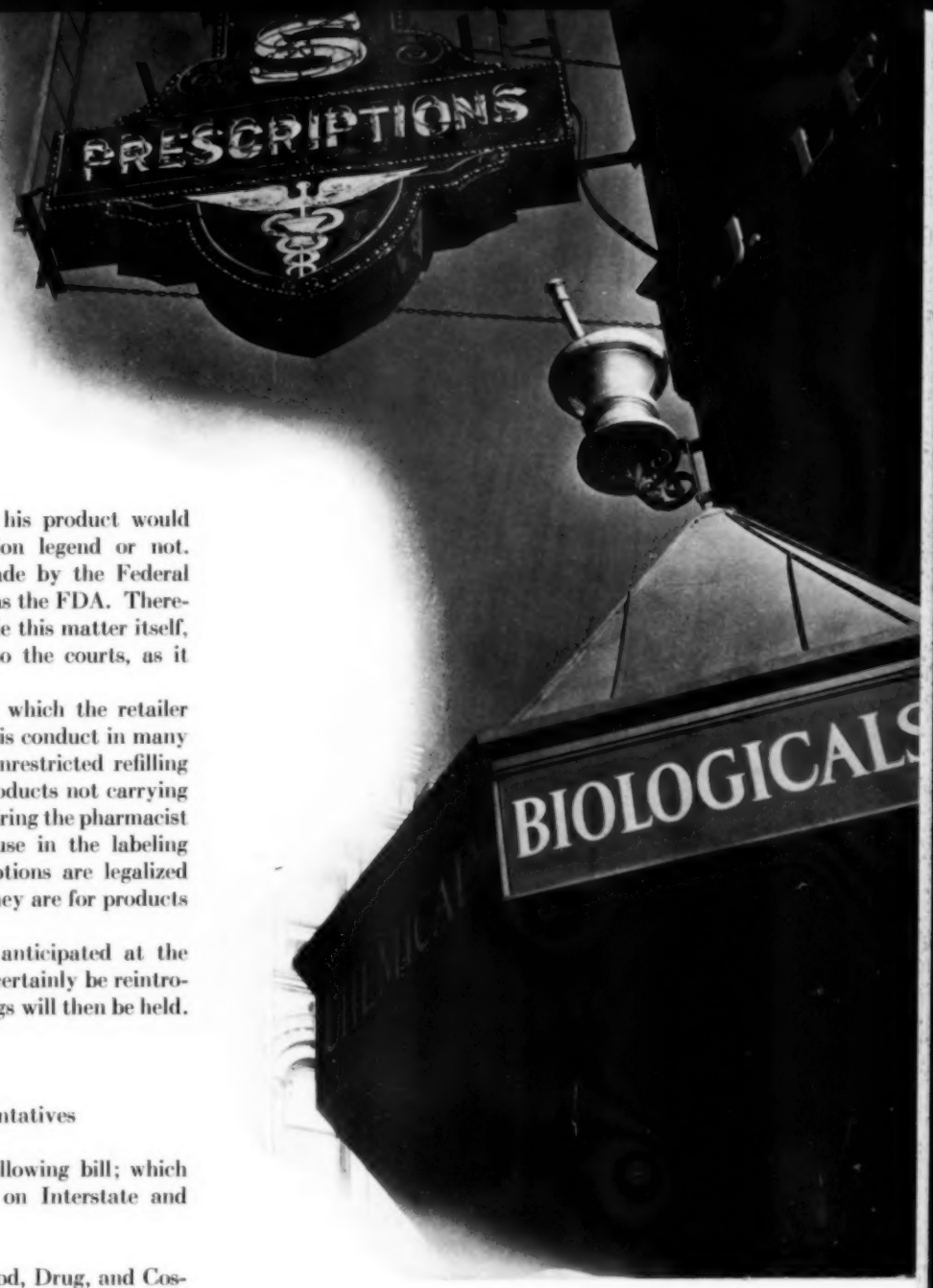
This resulted in a difference of opinion emerging between manufacturers and the FDA. Manufacturers generally contended that they possess the right to label any product in either way, and that if they wish to restrict a particular product bearing their name to prescriptions, they can do so, even though the same preparation might be labeled for over-the-counter sale by other manufacturers. However, the Food and Drug Administration is of the opinion that the purpose of the prescription legend is simply to insure safe and efficacious use of drug preparations. They claim that manufacturers do not possess the right to use the prescription legend as a means for controlling distribution; for building up and maintaining the goodwill of the medical profession; or to prevent the use of their goods in self-medication, if this is their objective. The FDA feels that if drug products are safe to the point at which their use in self-medication is without danger, then are very likely to be sold over-the-counter by pharmacists and so they should carry adequate directions for use. In the opinion of the FDA, the only products which should be restricted to sales on the prescription are those products which are not safe for self-medication, are habit-forming, or are not efficacious unless used under the care of a physician.

To press its point, the FDA went after the sale over-the-counter of products bearing the prescription legend. Then it started after the practice of refills of dangerous drugs in prescriptions. Finally the FDA expressed the opinion that no refills should be permitted. This struck hard at the pharmaceutical business since it is said that close to forty per cent of a drug store's prescription business is in refills, of which a very considerable part is not authorized by the doctor. The bulk of this business is in drugs which could be sold over-the-counter if the preparations did not bear the prescription legend. The FDA stated that sales of this sort would be perfectly legal if the druggist supplied the adequate directions for use, but this responsibility the druggists do not wish to shoulder. Neither do they wish to reveal the contents of the prescriptions given by the doctors which would be necessary if the refills were to be treated as over-the-counter sales.

To attempt to straighten the matter out, Mr. Dargavel and the NARD induced a pharmacist, Representative Carl T. Durham of North Carolina, to introduce a bill amending the Food, Drug, and Cosmetic Act so as to eliminate Federal jurisdiction over prescription practice. This bill had no chance of enactment, but it brought the subject to the fore. Now Represenative Durham has introduced a second bill (H.R. 8904). Drafted with the advice of FDA officials, there seems to be no official objection to the bill as introduced.

The most important effect of this bill from the viewpoint of the drug manufacturers is that it authorizes the Federal Security Administrator to determine, after investigation and public hearing, what drugs may be sold on prescription only. For that type of product the bill prescribes a mandatory prescription legend as follows: "Caution: Federal law prohibits sale or dispensing without prescription." Exempt from the adequate directions labeling requirement are habit-forming drugs, old drugs found by the Administrator to be unsafe or ineffective without professional supervision or use, and new drugs limited to professional supervision by the terms of the new drug application.

Under this bill the manufacturer would no longer



have the right to decide whether his product would be marketed under the prescription legend or not. Rather, this decision would be made by the Federal Security Administrator, which means the FDA. Therefore the FDA would be able to settle this matter itself, after a hearing, instead of going to the courts, as it must do under the present law.

The bill also includes provisions which the retailer has long wanted in order to make his conduct in many instances legal. The bill permits unrestricted refilling of prescriptions for the harmless products not carrying the prescription legend without requiring the pharmacist to supply adequate direction for use in the labeling of these refills. Telephone prescriptions are legalized to be confirmed later in writing if they are for products bearing the prescription legend.

While no action on this bill is anticipated at the present session of Congress, it will certainly be reintroduced in the next session and hearings will then be held.

The bill as introduced follows:

81st Congress
2nd Session H. R. 8904

In the House of Representatives
June 21, 1950

MR. DURHAM introduced the following bill; which was referred to the Committee on Interstate and Foreign Commerce.

A BILL

To amend section 503 (b) of the Food, Drug, and Cosmetic Act of June 25, 1938, as amended.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That subsection (b) of section 503 of the Federal Food, Drug, and Cosmetic Act, as amended, be amended to read as follows:

"Sec. 503. (b) A drug dispensed by filling or refilling a written or oral prescription of a physician, dentist, or veterinarian licensed by law to administer such drug shall be exempt from the requirements of section 502, except paragraphs (a), (i) (2) and (3), (k), and (l), and the packaging requirements of paragraphs (g) and (h), if the drug bears a label containing the name and address of the dispenser, the serial number and date of the prescription, or of its filling, the name of the prescriber, and, if stated in the prescription, the name of the patient, and the directions for use and cautionary statements, if any, contained in such prescription. This exemption shall not apply to any drug dispensed in the course of the conduct of a business of dispensing drugs pursuant to diagnosis by mail or otherwise without examination of the patient. If the drug is intended for use by man and—

"(1) is a habit-forming drug subject to the regulations prescribed under section 502 (d); or

"(2) has been found by the Administrator, after investigation and opportunity for public hearing, to be unsafe or ineffective for use without the professional diagnosis or supervision of a physician or dentist; or

"(3) if an effective application under section 505 limits it to use under the supervision of a physician or dentist, *(Continued on page 266)*

COMBINATION OF FUNCTIONS IN COSMETICS

By Harry Hilfer

PROBABLY the chief developments in new cosmetic materials have pointed towards the introduction of another function in addition to the primary function of the product. Their evolution seems to be a logical one because of the increasing stress of advertising copy in relation to sales, causing manufacturers to seek new functional properties for their products as a means to furthering the effectiveness of their advertising copy. This tendency has been gradually permeating into a great many different classifications and unfortunately, in some instances, claims have not been substantiated by results. In many others, developments have been so good that the whole method of formulation has been revolutionized as a result.

Deodorant preparations, when they first appeared, depended upon the presence of a bactericide to prevent bacteria from causing perspiration components to be degraded into odoriferous compounds. The next development led to the introduction of aluminum salts to block the sweat glands and thus retard perspiration. Most antiperspirants now include both the aluminum salts and a bactericide so that both functions may be included. From this point has come a multitude of applications in which the deodorant factor has been coupled with detergency and perfumery.

One of the most successful products of recent origin has been the "deodorant soap." It stemmed from the introduction into the conventional bar of soap of a bactericide of recent origin, but of proven value in its effectiveness to remove the skin flora in better fashion than can soap itself. The data presented by the agencies which did the experimental work was as good as could be expected, since it was largely done on human subjects who were subjected to different external influences. These agencies presented convincing proof that by the presence of the new bactericide in the soap and with continuous daily use the count of the skin flora showed a marked drop as compared to soap used without it. It could be therefore inferred that the incidence of bacterial activity on the pespiration would therefore be smaller. Organoleptic testing seemed to bear this out and the consumer is apparently quite willing to pay a premium for the added functional scope of this new soap.

Going off on another tangent we came to the deodorant cologne in which a bactericide is added to the alcohol-aqueous perfume oil vehicle. The agencies used here consist largely of quaternary ammonium compounds, but others are used as well. Their ready acceptance on the market has further indicated that another function is valued by the consumer in even the so-called "luxury items." Incorporation of quaternary ammonium compounds has further been observed in other alcoholic preparations ranging from rubbing alcohol to after-shave lotions. More recently the same idea of the incorporation of a bactericide has asserted itself in bath powders, where a deodorant factor is introduced in addition to the regular function the bath powder originally possessed. The use of the bactericide in all the foregoing examples has been advertised as a means of prevention of body odor, and has shown ready acceptance by the consumer who is apparently always ready to become more fastidious.

Further developments may be expected along the same lines in relation to hair dressings. In this instance, however, the use of the bactericide will be directed against the "bottle bacillus," associated with dandruff, and will present a product which is essentially a hair dressing with an anti-dandruff agency incorporated. Such a product is now on the market as an alcoholic solution of a fixed oil containing a quaternary ammonium compound. However, it may also be easily formulated as an emulsion containing a relatively large percentage of oil with the quaternary serving as an emulsifier as well as a bactericide. Such a combination of functions would appear to be a logical combination of the present hair dressing form.

These same agencies have found a use in baby skin lotions, where a protective film is coupled with the inclusion of a bactericide to prevent possible infections. This type of preparation is only one step removed from hand and body lotions where much the same conditions would be met.

The choice of the proper anti-bacterial would be dictated largely by its ultimate use and by available knowledge as an irritant is concerned. It is best to approach this problem by assuming that if it will kill a bacterium, it also possesses an intrinsic potentiality towards irritation. The irritation potential towards the human skin however varies with different substances as compared to its activity as a bactericide. Thus, it cannot be assumed that if it has a high bactericidal rating, it will therefore be high in its irritation potential since there are too many variables that may be included into the structure of the agency to allow such a view to be supported, but it may be assumed that there is an optimum concentration at which the agency may be employed. At this concentration it should behave as a good bactericide without showing any tendency towards irritation. Quaternary ammonium compounds have also been treated in the literature by inference as if they all had similar characteristics insofar as irritation and bactericidal activity are concerned. The author believes this type of thinking to be erroneous. If one quaternary is found irritating under certain conditions of use it cannot be assumed that all others will be, any more than it could be said of chlorinated compounds or organic mercurials. Since the activity of all these agencies vary so greatly with external conditions, such as other constituents in the formula, the only safe procedure is an actual clinical test with competent supervision and evaluation of results.

Another recent example of a combination of functions lies in the shampoo field. In tracing the evolution of the shampoo, we must start with the use of soap. Soap shampoos have always been good detergent agencies, but have behaved better in soft water areas which are more prevalent. Indeed in the not too distant past, rain water was specified for shampoos in these areas. The presence of bivalent metal ions in water actually is the one thing that has caused the development of the soapless detergents to be so rapid for use in shampoos. Shampoos made from cocoanut oil fatty acids, though better behaving than soaps of higher fatty acids in hard water, still precipitated and coated the hair giving rise to the acid rinse as a means of correction. The advent of the soapless shampoos, though easier to use in hard water areas, is not an unmixed blessing. Women still complain that they are drying and that their use makes the hair feel harsh to the touch. In addition, there is the further complaint that the hair is more unmanageable than when soap is used.

The reasons for these complaints are many and varied since there are several schools of thought. One hypothesis is based on the natural assumption that these detergents do too good a job of cleansing and that too much of the natural oils are removed in the shampooing process. Another hypothesis which is widely prevalent indicates that the so-called dryness and harshness is due to the nature of the detergent itself which feels harsh and dry in the residual quantities left on the hair and which no amount of rinsing could thoroughly remove. The difference between it and the soap shampoos therefore lies in the difference of the "feel" of the detergent film as compared to the soap film. It is further thought that the residual soap film makes the hair somewhat more manageable than does the residual detergent film. It is not within the province of this article to argue the merits of the various arguments presented and no such attempt will be made. There have been some preparations marketed to allay the defects of the detergent shampoos. These are the so-called hair rinses which contain a cationic agency in a vehicle of slightly acid pH and which are rather substantive to the hair under these conditions. The addition of this type of agency to the hair will therefore cause it to feel softer to the touch because of the nature of the new film.

Much the same idea has been incorporated in some of the shampoos now on the market. These agencies are called "hair conditioners" and depend on the incorporation into the preparation of cationic materials, so weakly active that they will not be incompatible with the amonic detergents used, but active enough to be substantive to the hair. Incorporation of suitable agencies of this type will introduce the much sought after secondary function of "softness" and easy manageability in addition to the primary detergency function and by their use one of the greatest of the complaints against soapless detergents is overcome.

The author does not necessarily advocate the use of soapless detergents over soaps nor is there any implication made that they are superior in soft water. There is an advantage in the use of the soapless agents in hard water, but the introduction of sequestrants has somewhat altered this failing of the soaps. However, it is undeniably true that synthetic products could be made to fit certain conditions more easily than could natural materials be qualified to fit the same conditions. It is therefore best to examine synthetic developments as clues to what may come in the future.

NOW OR NEVER

DUE to the unsettled conditions throughout the world which have now resulted in armed conflict in Korea, no one in this country of ours can be certain as to what lies immediately ahead. However, certain developments in our national capital indicate alleviation of a condition which has long been threatening this industry. The outstanding development was the rejection of Reorganization Plan No. 27 in the House of Representatives by a vote of 249 to 71. This plan would have set up a Health, Welfare, and Educational Department with a Cabinet officer as its head. And the Cabinet officer who would have appointed to this post is Federal Security Administrator Oscar R. Ewing, the champion of Federal compulsory health insurance.

While it is well known that the members of Congress generally do not trust Mr. Ewing, this vote also indicated a strong feeling in Congress against any furthering of conditions which would bring the practice of medicine under the control of the Federal government. Fortunately for the future welfare this industry and of the medical profession, the compulsory health insurance program of President Truman and Mr. Ewing has come to mean to the majority of the people and their representatives in Congress, the one step which will indicate that this country is going down the road to complete socialism. There are those who have felt that the tag of "socialized medicine" which has been generally given to the Truman-Ewing health insurance proposal was wrong in principle and that nothing was ever defeated by calling it by a name repugnant to the people. However, anyone who studies the subsequent steps which must necessarily be taken once the health insurance program is enacted, will not fail to realize that this program will lead to complete socialization of the medical care in this country.

In addition to this attitude of Congress, brought on largely by the legislators' dislike of Mr. Ewing and his activities, there is the situation created by the war in Korea and the fact that this calls for at least partial mobilization of the country's resources as well as of the manpower of the nation. Faced with a situation of this kind, Congress will neither have the time nor the inclination to fool around with any of these experimental schemes, and President Truman certainly must turn his mind to other things of far greater urgency. Certainly the President will be in no position to force consideration of the health insurance program under wartime conditions, and the Congressional leaders who do his bidding, will have much more important programs to take up their time.

Under these conditions it would appear that the drive for the health insurance program in Washington is definitely stalled for a considerable period of time. However, this should not be taken by this industry or by the medical profession in this country as an indication that the plan is dead. Such a proposal will never die as long as there exists conditions in medical care in this country which give its proponents sufficient facts upon which to base an argument in its favor. The time during which activity on the part of the Administration is delayed should be used by the professions, industries, and others opposed to the compulsory health insurance program as a time to intensify their efforts to develop a program of their own which will eliminate at least the major part of the need for any such program. For the projects under way to solve the problem without the government taking over to slacken up in their efforts merely because the threat of government action at this time has been forestalled, would be suicidal to the cause of free and independent medical care in this country.

Most people are only goaded to action by an impending threat that causes them to realize the precariousness of the situation, while a small minority are far-sighted enough to appreciate the dangers that lie ahead and prepare to meet them. Then there are those who are perfectly satisfied to let someone else spend the time and money to fight a battle that is equally important to their own interests. Their attitude generally is to the effect that the big fellows will take care of it.

The drug manufacturers, along with the medical and other professions and other industries, must realize that an extremely large segment of the population of this country is not satisfied with conditions surrounding medical care in this country and that something should be done to correct these conditions. The only place in which they find any sympathy with their views, and the only place in which they find anyone willing to do something about the conditions about which they complain, is in the Federal government in Washington.

The period of time during which the threat of a Federal program of compulsory health insurance has existed will reach a decade before very long. And during this stretch of years much activity has taken place and much talk has been indulged in by the opponents of the plan, but no significant progress has been made in bringing about a change in the conditions complained of. Certainly no plan has been proposed by which the average individual can insure himself at a reasonable cost against the expenses which must be borne in cases of serious illness. The hospitalization plans vary, and, as more coverage is given, the premiums to be paid naturally become higher.

The question of obtaining adequate coverage through private insurance companies is a complicated one. For full protection against whatever illness may befall a person, and for whatever may be the duration of the illness, premiums must be high. The average individual is not likely to buy this full coverage because of its relatively high cost compared with the cost of lesser coverage which he may believe may cover anything that might happen to him. However, the person of low income needs this full coverage just as much as does the person of higher income who can easily afford to pay for it. When buying liability insurance to cover an automoible, the person of little means does not need the extent of protection needed by the person of greater wealth and, therefore, the amount of premium paid on such policies are in accordance with how much protection a person needs. However, in the case of health insurance everyone needs the same amount of protection, but the ability to pay for it is something that must be solved. Perhaps it will be possible to base premiums on an income basis, but this is something that needs a large amount of study.

The medically indigent will always have to be taken care of by some means other than insurance. Even the proposed government plan would not provide for them because they would not be employed and therefore would not be covered by contributions to the fund. Therefore, these people would have to be taken care of by the states, perhaps with Federal aid. However, these people will not pose any more of a problem than they do at present, but more attention should be given to them to be certain that all areas of the country provide proper and adequate facilities for their care.

Then there is the question of those people who have passed the age of employment, having been retired at the age of 65 or more *(Continued on page 241)*

ORGANOLEPTIC PANEL TESTING*

*By L. C. Cartwright***

BETTMANN ARCHIVE

ORGANOLEPTIC testing is as old as man, himself, and a case can be made for its dating from the first living cell, because, in the broadest sense, any choice made by a living organism as a result of sensory response to any stimulus may be said to be based on organoleptic testing. Except as modified by culture patterns, every person's selections of practically everything he uses—of everything he *buys*, assuredly including pharmaceutical products—are largely determined by organoleptic factors.

Conscious application of organoleptic methods to the more or less quantitative evaluation of odor and flavor, as well as of other subjective properties, such as appearance, texture, feel, etc., dates back many years, or even centuries, as exemplified by expert tasters of wine, tea, and coffee, expert butter scorers, and even judges of dogs, poultry and live stock. In fact, it may not even be amiss to include critics of art, literature, and drama among organoleptic experts.

In the disciplines of science, because of a realization of the human tendency to err and of the uncertainties of subjective judgment, there has been a constant effort to introduce purely objective—preferably instrumental—methods of collecting data. Unfortunately, with respect to most properties of matter affecting sensory response, particularly odor and flavor, no purely objective methods of measurement of adequate sensitivity and precision are yet available. Thus, although size, shape, color, and other physical properties, such as viscosity, hardness, tensile strength, etc., are amenable to quite precise objective measurement and quantitative expression, the interpretation of these data in terms of the probable sensory response of a particular individual, or even of that hypothetical creature, the "average individual," is often most uncertain.

When we come to the physical and chemical properties of a matter which determine odor and flavor, even more difficult problems are encountered. In a large number of products, marked and important differences in odor and flavor result from the presence or absence of virtual traces of certain compounds, quite often of unknown identity, far below the range of the most sensitive known chemical or physical methods of analysis. Even when a constituent partly responsible for the odor or flavor of a product, such as hydrogen sulfide or sodium chloride, can be chemically determined with great precision, we are likely to find that its contribution to the total odor or flavor is decidedly influenced by other constituents of which we can neither determine the amount nor predict the net effect. So, we must resort to subjective sensory evaluations, and take such steps as we can to render the results accurate, reproducible, and expressible in quantitative terms.

*Talk given at a luncheon meeting of the Association of Medical Directors, New York City, May 5, 1950.

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Remarkable as the human senses are in detecting and evaluating fine distinctions, not only of odor and flavor, but of sound, color, form, etc., they can be rendered much more sensitive and discriminating by training, as in the case of expert tasters and perfume specialists. However, even the most expert sensory analyst falls far short of completely quantitative reliability and reproducibility in his evaluations. Both physiological and psychological factors, as well as external variables, affect his keenness of perception and his accuracy of interpretation, often to a very marked degree. The effects of these variables can be partly averted and partly eliminated by careful attention to the health and well being of the analyst, proper environment for testing, preparation and presentation of the samples, use of standard control samples whenever possible, repetition of tests, etc. However, usually the most effective means of increasing the precision, reliability and reproducibility of sensory evaluation is to use a group of trained experts, now generally known as the organoleptic panel.

The great volume of technical literature on organoleptic panel methods appearing in recent years reflects many refinements in selection and training of panel members, preparation and presentation of samples, and expression and interpretation of results. The interest of food technologists in these methods was emphasized by the fact that the first National Confereence on Methodology in Palatability Testing, held in Washington, D. C., last January, under the auspices of the U. S. Department of Agriculture was devoted almost entirely to consideration of organoleptic panel methods. A partial literature survey, prepared for the invited participants in this Conference, including about a hundred representatives of federal, state, college and industrial laboratories active in the field, listed 350 references of which less than 25 per cent were dated prior to 1940.

Our own applications of organoleptic panel testing have been predominantly in the field of food products, but we have given special attention to the influence of packaging materials on foods, both through the contribution of odor and flavor to the food by the package and through the protection afforded by the package against loss or alteration of odor and flavor. On the other hand, we have extended organoleptic panel methods to the solution of problems far removed from the field of foods.

The entire subject of sensory response by the consumer to pharmaceutical products, and its influence on the sales volume of particular brands or types of products, unquestionably merits more attention than it has received. Of course, a major consideration of the pharmaceutical manufacturer is the efficacy and safety of his product, just as a major consideration of the food processor should be nutritive value and safety. It may even be that these are the principal factors influencing some few consumers in their selection of products to purchase, but certainly the vast majority of consumers are predominantly influenced in their selection of products, especially on repeat purchases, by their sensory responses. What then does it profit the manufacturer to offer the best and safest product in the world, unless concurrent superiority in appearance, odor, flavor, feel, comfort, etc., leads the consuming public to select his product over competitive items?

The first step with respect to the relationship between sensory response to and consumer preference for a particular product, whether it be food, pharmaceuticals, cosmetics or widgets, is to determine the senses affected and the criteria of preference. Although these may appear to be obvious, it is wise to give them very thorough consideration, and it is generally essential to supplement any tentative conclusions with a carefully planned and executed survey of the preferences of an adequate sample of consumers truly representative of the market to be reached.

Such consumer surveys are usually quite time-consuming and costly, if properly conducted and sufficiently comprehensive to give reliable results. If not so designed and conducted, their results are likely to be more misleading than otherwise. In any event, they can seldom be adapted to the routine control of uniformity in production or to the development of new products or the improvement of existing products. For these purposes, the trained organoleptic panel offers the best known answer.

There are certain fundamental principles which are generally applicable to the selection and training of the panel, preparation and presentation of the samples, methods of evaluation and statistical treatment of results, but within this fundamental framework, organoleptic panel testing is an extremely flexible tool which may be effectively adapted to practically any problem of quantitative evaluation of properties affecting sensory response. Aside from problems of food formulation, packaging, shelf life, etc., we have applied organoleptic panel testing in such diverse fields as the smoking quality of cigarets, the detection, identification and determination of contaminants or adulterants in paperboard, acoustical cements, alcoholic beverages, and pharmaceuticals, the comfort characteristics of shoes and other wearing apparel, and the comparative evaluation of facial tissues, carpets, razor blades, shaving creams, tooth pastes, lacquer solvents, shampoos and shoe polishes.

Pharmaceuticals include such a wide range of products that it is difficult to be specific as to either the types of sensory response elicited or the details of organoleptic panel technic required for effective evaluation in terms of consumer acceptance.

EDUCATING THE SALESMEN ON NEW PRODUCTS

ALTHOUGH there are several channels by which a product can be promoted such as journal advertising, direct mail advertising, and sampling, the majority of pharmaceutical manufacturers rely heavily on the method of personal contact by field representatives. The degree of success of this method of promotion, in which the program is entrusted to field representatives, is directly dependent upon the extent of the representative's preparedness, and the responsibility for its success indirectly rests on the effectiveness of the sales training methods.

Far too many sales managers operate on the theory that if they employ the right men as salesmen there is little or no need for a training program. Certainly, in the highly involved business in which pharmaceutical manufacturers are engaged, the field representatives are selected with careful thought being given to their academic background, their personality, and their selling ability and it can be assumed that they are above-the-average salesmen. However, regardless of the caliber of the men, they can and will perform at a

*By Clyde Gardner, Jr.**

higher level of efficiency if they are given help in the form of the "how" to present and sell their products. Now in the past, sales management has tended to be lopsided in its operation by stressing the "what" and omitting the "how."

To be successful a training program must be a "selling" program. To use an old expression, a salesman cannot successfully sell a product unless he is sold on it himself. Educating the Field Force, therefore, boils down to the simple fact that we who represent management are engaged in a work of selling our product and its related selling ideas and selling methods to the members of our respective sales force. We must adopt a "selling attitude" and employ the cardinal principles of salesmanship if we hope to achieve a reasonable degree of proficiency. The omission of any of these fundamental principles will result in a large percentage of "no sales." We know that the men are loyal company employees and that they will willingly follow orders; however, if they are properly and completely sold their selling efforts will attain a degree of effectiveness not possible under a "following orders" regime. I believe I can say rather dogmatically that there are no shortcuts nor is there any other way to effectively do the job. A simple exposure of the facts about a product is not enough. The facts must be deeply and vividly etched into the men's thinking process until they become a part of their personality. They must so completely believe in the product that their confidence and enthusiasm will not be depressed by the adversities they will normally encounter in their daily selling activities. Their complete conviction can only come from the possession of accurate and reliable knowledge of the product together with a crystal clear and orderly concept of its sales points and selling methods.

The planning of a product introduction program to the field staff resolves itself into orderly sequence:

a. Collection of facts about the product.

(Continued on page 262)

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BETTMANN ARCHIVE

By Milton A. Lesser

DYSMENORRHEA

DYSMENORRHEA is a word which has a most unpleasant connotation for many women. These women do not have to be told that dysmenorrhea is defined as painful and difficult menstruation. In its broader meaning, dysmenorrhea has been described[1] as an exaggeration of pelvic discomfort and other subjective symptoms during menstruation.

The condition is far more prevalent than is generally realized. Browne,[2] for example, suggests that 65 per cent of all women between puberty and the menopause suffer from some monthly discomfort. More conservative are the figures cited by Randall and Odell[3] which indicate that dysmenorrhea occurs in approximately 35 per cent of menstruating women. This is in line with the observations made by one group of investigators,[4] who noted that there is a variation in the estimates of the number of women who suffer from dysmenorrhea at some time in life. Combining all the reports, they felt justified in the view that probably one-third of all young women in America are afflicted.

It is generally recognized that the distressing symptoms associated with menstruation are responsible for a major part of the disability among young women. Indeed, dysmenorrhea has been cited[5] as one of the

most important causes of absenteeism and decreased efficiency in women. Thus, Winther[1] found that of 7,379 women who entered the University of Minnesota over a four-year period, 20.6 per cent complained of menstrual pains severe enough to necessitate going to bed occasionally and 2.6 per cent were confined to bed every month.

Although other classifications are sometimes used, dysmenorrhea is generally described as primary or secondary. As the name implies, secondary dysmenorrhea is caused by or is secondary to some obvious pathological lesion, particularly in the pelvic organs. This acquired type of dysmenorrhea may develop at any time during the menstrual life of the woman but, as noted by Grossmann,[6] it usually appears during the third decade of life or later. In the majority of patients, fairly well defined pelvic pathology can be demonstrated. He points out that careful study will usually reveal the presence of some tangible clinical entity which can be treated with directness and often with success. Clearing this basic condition removes the cause of the secondary dysmenorrhea.

Primary dysmenorrhea, the disorder being discussed in this review, is also known as essential dysmenorrhea. This condition commonly appears at or shortly after the menarche and is more common in the age groups of 11 to 30 years than in the older age groups. Menstruation usually occurs at regular intervals in these young women and the rate and amount of flow approximate the normal. Pelvic structure is within the normal range and, as a rule, no pathological conditions can be found.[6]

Primary dysmenorrhea may be associated with overwork, hysteria or an endocrine imbalance.[7] Despite its frequency, however, the etiology of the condition remains a mystery and the basic cause (or causes) of the pain is unknown. Of course many theories have been advanced to explain the symptoms. Thus, uterine spasm, contractions, or ischemia has each been considered the responsible factor.

A disturbed endocrine balance may be responsible for the symptoms. Such a dysfunction might well cause an upset in the physiological balance of the uterus, consequently bringing about uterine cramps. Investigations have indicated that many cases of dysmenorrhea may be attributed to an imbalance which occurs between estrogen and progesterone.[8] Other endocrine factors may enter the picture.

For a long time, it was thought that an obstruction in the uterine or cervical canal was responsible for dysmenorrhea. Today, this is believed to play but a minor role as a causal element. Pertinent, however, is Winther's[3] observation that the pain may be produced by a chronic pelvic congestion due to over-exertion, fatigue, constipation, lack of exercise, long hours on one's feet or sitting; or it may arise from abnormal sex practices.

According to one of the oldest theories, dysmenorrhea often occurred in individuals with certain structural defects of the uterus, various degrees of infantilism of the genital tract, and a variety of other defects. Although corrective measures sometimes provide relief, it is now rather widely recognized that the incidence and severity of structural defects are no greater in women who suffer with dysmenorrhea than in those who do not.[6]

Nervous instability may also be an important consideration and there are many who feel that psychogenic factors rank high as causal elements in dysmenorrhea.[9] Conceding that this may be true in some cases, Grossmann[6] notes that most dysmenorrheic women are emotionally stable and show no greater tendency toward neuroses or psychoses than do other persons. Indeed, it is entirely possible that dysmenorrhea may precipitate or exaggerate a psychopathologic personality, rather than the reverse.

Despite the number of theories already available, students of the subject continue to develop new views or modify old ones in the light of further evidence. Thus, the observations made by Torpin and his associates[4] suggest the hypothesis that dysmenorrhea may result from a physiologic increase in sensitivity which varies in intensity and type from patient to patient. This hypersensitivity, they say, may concern only the uterus or it may involve other systems such as the gastroenteric, cardiovascular, and nervous systems; thereby accounting for the particular dysmenorrheic symptom complex of a given individual. Other factors may also contribute to dysmenorrhea, according to this theory.

While the symptoms may vary in type and intensity with different women, there are certain elements that are common to all cases. Pain is, of course, the basic symptom. The distress starts with the menstrual flow and consists of lower abdominal cramps. According to one apt description,[8] the cramps are similar to miniature pains of labor in most cases. The pain may or may not be associated with backache, headache, nausea and vomiting. It persists through one or two days of the flow.[3]

Worth noting in this connection is an investigation conducted by Larkin.[10] Of 366 student nurses replying to his questionnaire, 191 reported that they suffered from one of four types of dysmenorrhea. Mild cramps which caused discomfort but were not incapacitating were reported by 46.6 per cent; strong cramps with headache and nausea by 39.8 per cent; severe cramps with headache and nausea by 8.9 per cent; and severe cramps, with or without headache, which compelled them to remain off duty, by 4.7 per cent.

It is frequently pointed out that marriage and childbirth ordinarily cause dysmenorrhea to disappear. Indeed it has been said that a full-term pregnancy is a most effective cure for primary dysmenorrhea. This, obviously, is a prescription that cannot always be filled.

Contrary to these common beliefs, Shute[11] has found that dysmenorrhea is not restricted mainly to single women and that marriage itself is not a cure for it.

(Continued on page 274)

THE GLUCONATES

*By George B. Stone**

THE physiological essentiality and nutritional indispensability of certain metals have interested a large number of investigators over the past century. The necessity for such elements as calcium, magnesium, sodium, potassium and iron for the maintenance of life has been accepted in fact, although the actual biological mechanisms through which these elements act have still not been specifically elucidated. These metals are required in relatively large quantities for vital processes as compared to other items of the diet or when employed therapeutically. Only recently has more complete information been reported as to the metabolic role and therapeutic value of magnesium and potassium.

In addition to these five metals, certain others appear to be required in very small amounts. These so-called "trace" elements are presumed to be essential, but their indispensability in some cases is still a matter of conjecture. The trace metals which appear to be necessary for life are copper, zinc, manganese, and cobalt. The actual metabolic role of all these metals is, for the most part, obscure, and the deficiency symptoms which are produced by their omission from the diet in many cases are neither striking nor spectacular. For this reason, over the past two decades we have seen the emphasis in clinical and nutritional research placed on the role and action of such substances as vitamins and hormones, as for example vitamin B_{12} and cortisone, deficiencies or imbalance of which produce definite symptoms and where their therapeutic use produces dramatic recoveries from the observed conditions. In fact the recent investigations relative to potassium and magnesium occurred principally because the therapeutic use of these metals brought about almost amazing results.

In the past, where diseases or deficiency symptoms have been thought to be the result of mineral deficiency, inorganic salts of the metal concerned have usually been employed. Normally, the anion in such compounds exerts its own physiological action, thereby producing undesirable side reactions and lowering the patients' tolerance to the compound, as well as occasionally increasing the toxicity. In other instances, a lack of solubility prevented effective administration of the compound.

Thus the therapeutic or nutritional use of metallic salts of a compound, the anion of which, in itself, exerts little or no pharmacological action would be of distinct value. Such compounds are to be found in the metallic salts of gluconic

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acid. The gluconate anion is without any apparent pharmacological action, and the toxicity of the gluconate radical is of a distinctively low order. Hence, the metallic gluconate may be administered as an effective source of the metal without any complications arising from the presence of the gluconate radical. All of the metallic gluconates are quite soluble in water.

Some word might be brought forth concerning the parent radical of these metal salts, namely, gluconic acid. Gluconic acid is a pentahydroxy caproic acid derived by the oxidation of the aldehyde group in the common sugar, d-glucose. It was first isolated about 1870 and was prepared by chemical oxidation reactions and later by electrolytic methods. In 1922, the French chemist, Molliard, discovered that gluconic acid was the metabolic product of certain molds, and the commercial production of gluconic acid today is principally through the fermentative oxidation of glucose.

Gluconic acid is a very mild acid and does not display any marked physiological actions. In fact, it has been demonstrated that gluconic acid may be tolerated in the daily diet for years without injury or disturbance to the digestive system. Upon parenteral injection the gluconate radical is also of relatively low toxicity.

Calcium Gluconate

The low order of toxicity of gluconate salts and the high tolerance with which the body absorbs and metabolizes these salts is perhaps best illustrated by the most commonly used gluconate salt, Calcium Gluconate U.S.P. Since this compound was first placed on the market some twenty years ago, it has received almost worldwide acceptance in the medical field as a therapeutic source of calcium.

Calcium, in addition to having the primary function for the formation of bones and teeth, is involved in a large number of physiological processes. Among these may be mentioned the blood coagulation process, the regulation of heart beat, the transformation of chemical energy into muscular contraction, the maintenance of normal membrane permeability, and regulation of the osmotic, water and acid-alkaline balance of the circulatory system.

The principal use of calcium gluconate has been in the treatment of conditions predisposing to rickets or tetany where a dietary insufficiency or imbalance of calcium is observed. The high absorption rate of calcium gluconate as well as the relatively large dosages which can be administered orally over prolonged periods of time without digestive disturbances or injected parenterally without irritation is one of the main advantages of calcium gluconate.

In recent years, a large number of ailments have been reported as being benefited by the use of calcium gluconate in conjunction with other medicinals. This is not unexpected in view of the large number and variety of biological functions in which calcium demonstrates some physiological action. In a recent monograph some forty reports indicated the value of calcium gluconate in the treatment of a wide variety of ills and it is anticipated that many more will be reported in future medical literature. For this reason, the pharmaceutical application of calcium gluconate is being extended to a rather large variety of proprietary products. In addition to its use in tablet and capsules or in sterile solutions for parenteral injection where the active ingredient is calcium gluconate alone, we now find that calcium gluconate is being employed in such products as antacid preparations, analgesics, vitamin and mineral products and many other similar preparations. From a purely pharmaceutical viewpoint, calcium gluconate is stable in such mixtures and in most cases is compatible. At the present time, it is possible to employ calcium gluconate not only as a source of calcium but as a dry base for oral products such as tablets and capsules. Because of its relatively high solubility as far as calcium salts are concerned, calcium gluconate may also be employed as a source of calcium in liquid preparations, for example multivitamin emulsions or multi-mineral products.

Ferrous Gluconate

The necessity for iron in the human system has been *(Continued on page 266)*

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PACKAGING AND SELLING

TOO BIG A BONUS FOR ONE COMPANY

It is getting very near the time when one of the very large retail food interests should bring a complaint against the Government for gross and exaggerated unfair competition in the way that they have brought into being several million dollars' worth of pretty effective advertising for the Great Atlantic & Pacific Tea Company.

We have been continually impressed with the way in which various groups in the United States have been inspired to spring to the defense of the A & P in a way that has developed a continual flow of publicity and a continual stimulation to group goodwill.

Just recently we read that the International Baby Chick Association, the largest association in the three-quarter-billion dollar poultry industry, publicly c o n d e m n e d the anti-trust charges against the A & P as "a blow at industrial morality by the very concept of the Government's allegations."

At its 34th annual meeting with 6,000 present, the resolution called the A & P a real friend of both farmer and consumer which stands unjustly accused. The convention pointed out that the food chain has cooperated in programs for the improvement of egg, poultry and meat quality "encouraging producers through economic incentive and distributing on a basis of honest grades thus contributing to the health of the nation's consumers."

We would guess that quite a few million people among farm families as well as others will read or hear of this declaration by the assembled poultrymen and be duly impressed by this warm commendation of the integrity and honest business dealings of this particular food chain.

Certainly any publicity agent, if he could have maneuvered even a sizable fraction of this nationwide clamor from so diversified a group of people in favor of any one business organization, would surely be held as the greatest press agent of all time. The position of Chairman of the Board or even the Presidency would be meagre reward for such an outstanding genius.

It has been said more than once as a cynical sort of joke that a citation by the Government can often be worth more than the trouble which it brings. By this, of course, the cynic means that the citation is based upon grounds on which the Government is not too secure or which are trivial in nature.

The case of the A & P should warn the Government that a case of this kind, based upon a political philosophy which does not have many warm adherents in this country and directed against a company which has earned active public approval in its everyday business dealings with the public over a sustained period of time could lead to some very clever thinking which would d e l i b e r a t e l y maneuver the Government into a future position of this kind, for rewards which we already have seen are about as big a publicity stake as any business could hope to gamble for.

Retail High Spots

The Census Bureau has just released a comparative state summary taken from the 1948 census of business.

Seven states do 47 per cent of the volume in retail trade. These states are California, Illinois, Massachusetts, New York, Ohio, Pennsylvania and Texas. New York holds first place in dollar volume with 11.2 per cent of United States retail trade. Increase in retail sales since 1939 has been greater in the Southern and Pacific states than in other parts of the country.

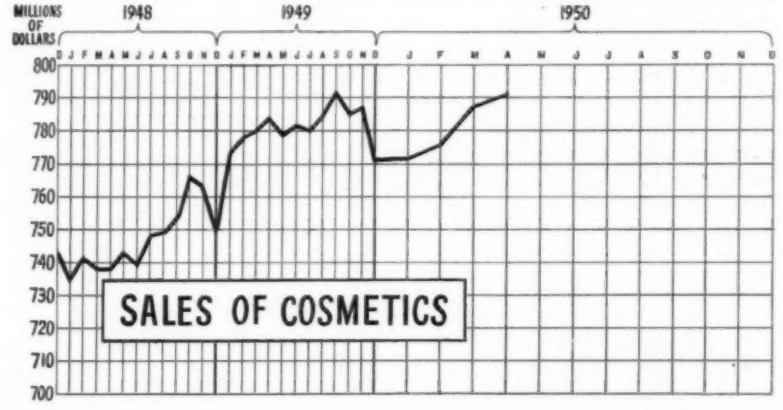
For instance, the Southwest Central states lead with an increase of 252 per cent, followed by the Southeast Central states with 248 per cent, the Pacific states with 246 per cent and the South Atlantic states with 238 per cent.

Single states which show the greater percentage increase in retail sales are Arizona, 307 per cent; North Dakota, 289 per cent; Florida, 282 per cent; New Mexico, 280 per cent; Alabama, 276 per cent; South Dakota, 267 per cent; Arkansas, 263 per cent and Oregon, 261 per cent.

Per capita expenditures were highest in the Pacific states and next highest in the mountain states.

Per capita expenditures in retail stores went from $319 in 1939 to $893 in 1948.

Retail sales of cosmetics for the twelve months ended with April 1950 totalled $791,628,000. This compares with $787,367,000 for the twelve months ended with March 1950, and with $783,077,000 for the twelve months ended with April 1949.



Dizzy Retailing

One of the few good things sales managers could hope for out of the present situation is a halt to the dizzy mix-up that is occurring in retailing in a competitive struggle to catch Mr. and Mrs. Public on the run and to offer them retail buying convenience in time and place with maximum efficiency.

On the surface one of the effects of this mix-up appears to be an attack on the traditional classifications of retailing and on the traditional retail trading centers. As examples, Firestone Tire Agencies have for some time been expanding into a sort of general type store, predominantly in hardware and sporting accessories. Following this trend, some gasoline companies seem to be moving in the direction of building an automotive department store out of their favorably located filling stations. Esso Standard Oil Company has a huge advertising and sales campaign for this year in support of its 25,000 gasoline dealers in an effort to expand and develop their retail sales.

Highway transit shops are bobbing up on all sorts of main arteries covering nearly every type of retail endeavor, and there has long been a trend for furniture and clothing stores, such as the Wayside Furniture Shop, to establish retail stores on main arteries at considerable distance away from any concentrated community. In all this mix-up it is very apparent that the automobile is playing a decisive part.

The suburban shopping center development, which is growing at a dynamic rate in this country, is a recognition of the complete mobility today of the American consumer. Another example is the rapid growth of the open air movie with which is included very often all sorts of recreational facilities and in some cases shopping facilities.

Even banks are joining this automotive trend, and quite a considerable number of them now have drive-in facilities for depositing and withdrawing money.

All of this mushroom growth of all kinds of retail services and facilities could paint a disturbing picture for many kinds of traditional, specialized retailers caught in the middle of congested, traffic sections. At least it would seem to indicate that they are about to be shorn from a fractional part of their business. There is one indication, however, that many of these ventures may turn out to be over-extensions and on a prolonged period of trial and error, may not give the consumer what the consumer wants in spite of the novelty of quick convenience.

The airports started with a great program of community development with recreational and retail facilities of all kinds. But according to an authority on this subject, this sort of development isn't working out at all and the tendency of future airports will be more and more to confine extra facilities to a limited number of consumer conveniences which are logical and necessary for the large volume of transient travellers who pass through airports.

It is very apparent that many sales managers directing the distribution of heavily advertised, utility, mass distributed products will find a very serious credit problem in following many of these new developments and will be compelled to proceed with crossed fingers and a great deal of caution. Even though the sales manager of a product of this kind is under compulsion to have his product available wherever the consumer wants to pick it up and does not have any problem of retail dilution, nevertheless it would seem sensible to take the viewpoint that many of these new developments are untried and highly speculative and have yet to prove that they are the type of retail outlet customers will support over a sustained period.

Folding Boxes

According to Charles Disbrow, president of the Disbrow Manufacturing Company, Inc. of East Orange, New Jersey, it has been proved that when the public sees an old trade-mark package all dressed up they automatically buy it even if they have some of the product on hand in an old package.

The Disbrow Company has recently designed more than 100 different boxes for national distributors.

Manufacturers of folding boxes are generally divided into two operating classes—those who do volume work and those who fill orders for less than 250,000 containers. This latter group to be successful must depend upon a large number of individual customers. They are in a specialized field and must have a flexible working force so as to be in a position to turn out a job on quick order. For this they must have large storage space for many varieties of cardboard, an efficient bank of presses and an aggressive art department.

Some large users of folding boxes who place orders in the millions also keep an extra set of dies at the plant of the diversified folding box manufacturer to take care of rush orders, particularly when inventory orders crop up.

Biggest Shopping Center

Almost everyone has heard of Levittown—the biggest housing development in the United States—created by the nation's biggest home builders, Levitt & Sons, Inc.

This huge mushrooming, new home center was set out in the middle of potato farms several miles from Hempstead, Long Island, one of the booming business towns of this country.

It seems today that anything like several miles separating the customer from shopping is an anathema to marketing men. So Levittown, modern in every other way, is now to have the biggest new shopping center in the United States. This is an interesting development because the whole conception of the marketing arrangement is that of a separate, distinct, unified retail group associated with a separate, distinct residential group.

In addition to being far and away the largest in the East and probably in the country, this marketing center is supposed to have the biggest collection of leading chains ever concentrated in one place. In less than a year the center intends to add a big theater and several department stores.

A recent study of shopping centers showed that recreational facilities are a "must." In the survey 83 per cent of the people said that they wanted a movie, 81 per cent a swimming pool and 79 per cent a skating rink. Usually some facilities for care of children are added. Parking facilities are of course the heart of the whole shopping center idea and this new Levittown center will be able to accommodate 2,500 cars.

Sic'Em

At least one of our retail leaders has no complexes about going after business.

Said this man in a recent speech, "We in the soft-lines business have a joint responsibility to accelerate obsolescence. It is our job to make women unhappy with what apparel they have. It might also be said that it is our job to be merchants of unhappiness. By improving the desirability of merchandise, we must make the customer so unhappy with what she has that her husband will find no happiness in his excessive savings. We have not made our proper contribution to the total economy until we have achieved this result."

Increasing Impulse

The percentage of products purchased by impulse or unplanned buying is increasing, according to the latest report of a continual national survey sponsored by the du Pont Company. A similar survey in 1945 showed that nearly half of the purchases in a super-market were bought by impulse. Now nearly one-third of the retail purchases in these stores are definitely planned before entering the store. The exact figures show that 66.6 per cent of all purchases was decided at the point-of-sale after reaching the store. The conclusion: "People are going shopping for food in super-markets with a less specific plan and a more open mind, searching for what looks good."

A very interesting thing in this survey is that there appears to be a very wide variation in the percentage of impulse buying for different classifications of merchandise. For instance, in a super-market only 6.3 per cent of the candy purchased was planned in advance. Another high ranking impulse item is chewing gum, where 95.5 per cent of all purchases was made on the spur of the moment.

Department Stores

Department store sales in 1949 declined for the first time since 1938. In general, specialty stores followed this same pattern, only more so. Small stores were harder hit than the larger stores whose volume exceeds a million dollars annually. This is a summary of 1949 business from the "Operating Results, Department and Specialty Stores in 1949." published by the Harvard University Graduate School of Business Administration.

Some other interesting conclusions from this study are that there was an increase in the number of transactions handled, although this amounted to less than 1 per cent and this increase served only partially to offset the effect of lower prices, which was the real cause in the drop in volume. In addition, the average gross sales made in department stores in 1949 dropped for the first time since 1938. This average sales amounted to $4.35, which was 21 cents below the all-time high grossed in 1938.

Although the sales of soft goods fell severely, it is interesting to note that the group which is included under the term small wares, that is toilet goods, notions and novelties, actually saw a sales increase rising from 10.5 per cent of total sales to 11.3 percent.

This report confirms general opinion in that it specifically shows an impressive performance of branch stores and a clear indication that branches turned in during this year a better sales record than the parent store.

Industrial Charm

Motorola, Inc. is the first company, so far as we know, to establish a charm school for its employees.

This company, a leading maker of radio and television sets located in Quincy, Illinois, has just set up a charm school for its 300 female employees to be held in the Quincy Moose Club.

A Chicago modelling agency is conducting the course.

Slide Buying

A Canadian department store, that is Freiman's in Ottawa, is testing out what seems to be a completely new method for a centrally located, metropolitan store to hold and develop business in out-lying suburban areas.

Freiman's new plan is called Vis-O-Matic. The first Vis-O-Matic store is set up about 100 miles from the main store in the small town of Pembrooke. This comfortably furnished little store is equipped with several batteries of colored slides which permit the seated customer to see projected on a screen over 2,000 of the main products available and on display at the main store. By push button control the customer can find any type or style of apparel, stop and return to any screen for closer examination, or at will switch to some other department such as cooking utensils.

Orders are teletyped to the main store and deliveries are made the following day.

Air Packaging

According to aviation experts, there is a very great need and a very great opportunity awaiting the shipper who does some careful research in packaging for shipment by air.

Air shipment requirements call for only a bare minimum of packaging which gets away from costly and heavy boxing and packaging techniques. As a result, many shipments are arriving at air freight terminals in such flimsy containers that a great deal of time and expense is wasted in reinforcing or repackaging these shaky containers.

Air freight on 16 certificated, domestic trunk line carriers jumped from 38.1 million ton miles in 1946 to 122.9 million ton miles in 1949.

Easy Cost Cut

Department stores are among the last of all big retail units to make a detailed study of efficiency in cost accounting, and materials handling. Certainly they have lagged far behind the large variety and chain store operators.

Just to show what can be done, one department store is now getting the manufacturers to mark all packages to the store with the department and order number. This simple change has reduced the number of steps the product must go through to reach the sales counter from 27 to 15.

Co-op Television

According to what we hear, the Anchor-Hocking Glass Company is the first national advertiser to establish co-operative television advertising.

We hear that the national hook-up of this company is being offered on a cooperative spot basis to a number of participating brewer customers around the country.

Can This Help Cosmetics

It sometimes happens that one industry's hard luck is another industry's bonanza.

We don't know yet whether the cosmetic people have found any additional market from the women who seem to be increasingly going without stockings and from the men who seem to be going increasingly without hats.

There should be something in this worth a little cosmetic study.

Survey

The Consumer Analysis for 1950 of the greater Seattle market has just been published by the Seattle Times. Among the interesting data shown in this consumer panel is a comparison extending over the last three years of the percentage of consumers using various kinds of packaged merchandise.

Below is a list of several products in our industry which shows, at least for the city of Seattle, the increasing or declining consumption for these particular products.

PRODUCT	*1950*	*1949*	*1948*
Liquid Shampoo	62.7	62.4	60.8
Cream Shampoo	27.2	27.4	23.8
Tooth Paste	78.7	81.9	80.1
Tooth Powder	42.0	38.9	39.7
Lipstick	89.7	88.4	86.1
Face Powder	81.8	85.0	88.1
Nail Polish	60.8	62.6	63.1
Deodorant (*Women*)	85.0	83.8	80.7
Deodorant (*Men*)	35.0	30.0	
After Shave Lotion	62.6	58.8	

New Perfection
DROPPING PARTS
For Dependable Performance

As originators and world's largest manufacturers of screw-cap dropping parts, Pennsylvania Glass Products Co. has built up an outstanding record of dependability—in product, in service and in business integrity. This hard-won reputation is your assurance of satisfaction, your guarantee of quality.

New Perfection dropping parts are available in a wide variety of styles, colors and sizes to fit your own bottles or can be supplied with our bottles in sizes and colors listed below.

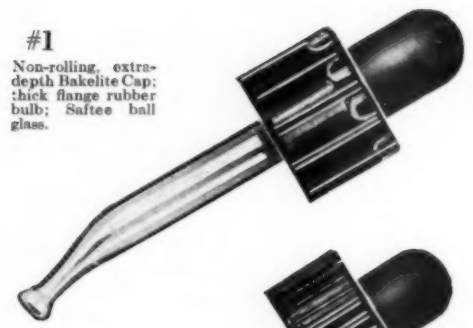
RUBBER BULBS
in natural rubber for general use or AMEKINE SYNTHETIC RUBBER which is highly resistant to the swelling which ordinarily results from use with oil preparations. Various colors and styles.

DROPPER GLASSES
plain or CALIBRATED IN COLOR. The correct glass for every requirement. Careful manufacture assures uniformity and cleanliness. Many styles in any length.

CAPS
of plastic or metal are designed for perfect closure, strength and attractiveness. Many styles, colors and sizes.

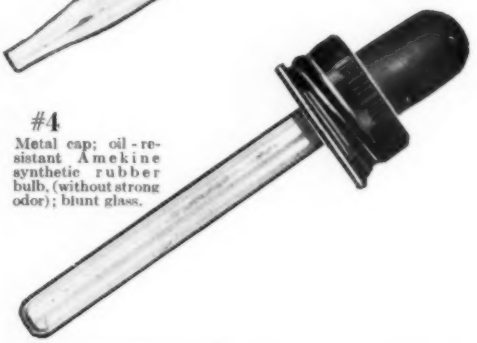
BOTTLES
in an eye-catching modernistic style in Amber, Blue, Green or Clear glass. Sizes : 2 cc. ⅛, ¼, ½, 1 and 2 oz.

New Modernistic bottle. Designed to lie flat for convenient labeling. Oval front provides ample label space.



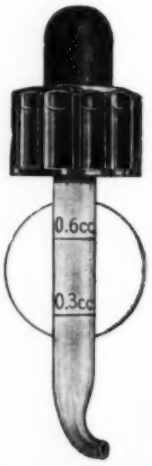
#1
Non-rolling, extra-depth Bakelite Cap; thick flange rubber bulb; Saftee ball glass.

#3
Regular plastic cap; thin flange rubber bulb; semi-blunt glass.



#4
Metal cap; oil-resistant Amekine synthetic rubber bulb, (without strong odor); blunt glass.

NEW PERFECTION Dropper Glasses Calibrated IN COLOR



New Perfection Dropper Glasses can be marked in color at any levels which you desire, making it easy and convenient for customers to administer your product in specific doses.

#2
Non-rolling, extra-depth Bakelite cap; thick flange rubber bulb; special bent glass (CALIBRATED IN COLOR).

Write for Samples and Quotations

PENNSYLVANIA
GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH (13), PA., U.S.A.

Bound to Come

The selection of days or weeks for national sales promotions has grown to such an extent that there is already very severe overlapping.

The roster of these days and the industries and trade associations sponsoring them would make quite a substantial directory.

Now we understand one of the more recent ones is gearing up for greater activity next year. This is the National Leave Us Alone Week scheduled for April 1 to April 8.

High Retail Costs

Mass retailers—not only department stores, but also mail-order houses, variety chains, *drug chains*, and others—which originally operated on a low cost basis, are not doing so any more, Retail Grey Matter points out. "Almost everybody in the department store field may be astonished to learn that between 1900 and 1905 Macy's operating expense was approximately 20 per cent," it is stated. "During that same five-year span, Sears operating expense was approximately 17 per cent, and gross margin figures for the same period were 25 per cent for Macy's and 24 per cent for Sear's.

"Today, however, with the exception of the super market, our mass retailers operate on gross margins of 32 to 36 and even 40 per cent. Thus, while the food store has met all of the problems of rising costs with a cut in mark-up from 40 per cent down to 16 *per cent* (and with 14 per cent the immediate goal)—other mass retailers, whose enormously expanding volume *presumably* produces economical operation, have *just about doubled* their gross margins! When department stores (and other mass retailers) show no gains in selling transactions per total working force, while food stores show enormous percentage gains in the last 20 years, we see one explanation. Some day—and perhaps soon—a hue and cry will go up in this land. It will be directed against *high-cost mass* retailing. And a political Sir Galahad, on a white charger, will storm into the fray.

"The mass retailer must prove, at the bar of public opinion, that his gigantic volume does indeed bring merchandise to the public at lower cost. If he doesn't, he will have to move over for a new type of retailer—perhaps the super market—that proves itself able to translate the new era of robot retailing into *lower* prices. Few *manufacturers* have *doubled* their gross margins since the turn of the century. *Most* manufacturers operate on a *lower* gross margin than 50 years ago. But the mass retailer has apparently been *totally unable* to make larger *volume* produce operating *economies*."

Department of Commerce Monthly Retail Trade Report

Retail sales of all kinds in drug and department stores showing sales for the month of May 1950 as compared with the same period in 1949.

	Department Stores	*Drug Stores*		*Department Stores*	*Drug Stores*
Atlanta	+4	+4	Minneapolis	+16	+4
Baltimore	−3	+3	Milwaukee	+4	+5
Birmingham	+6	+4	Newark	+2	−7
Boston	−4	0	New York	−1	+1
Chicago	−1	+2	Philadelphia	−1	+3
Cincinnati	+4	+2	Pittsburgh	+3	+7
Cleveland	+2	+3	Providence	+2	+3
Dallas	+9	+19	St. Louis	0	−3
Detroit	+6	+6	San Francisco	+6	0
Los Angeles	0	−4	Seattle	−3	+7

Excise Tax Figures on Cosmetics

The Treasury Department has issued complete fiscal year figures on the retail excise tax on cosmetics for the year ended June 30, 1950. Taxes collected for the year July 1, 1949 to June 30, 1950 were paid on a volume of sales for the fiscal year totaling $474,976,882.50. This compares with taxes collected on a volume of sales of $469,846,206.60 for the fiscal year July 1, 1948 to June 30, 1949. Thus an increase in sales of taxable cosmetics of $5,130,675.00, or 1.1 per cent was registered for the year.

How to Increase Sales

There are ever so many ways of increasing sales of goods by increasing customer convenience that it is difficult to single out any particular one as outstanding. However, we are quite impressed with the plan of the mattress department of a large store which developed a fixture that holds mattresses upright instead of having them lie flat. This enables a customer to lean back against the mattress without actually having to lie on it, and thus sales are increased because the customer can make a selection without the help of a salesperson.

But speaking of improving the sales of goods in this industry at retail, another department store has a toilet goods department which is long and narrow which is conducive to neglect of customers by salespersons. To solve the problem, the store built some two-faced self-help shelves and placed them in the farthest locations. Now sales have risen because customers are able to make their own selections and brings the goods to the salesgirls.

Cigarettes in Grocery Stores

Well do the older folks in this industry remember quite distinctly when the grocery stores started handling cigarettes. First the chains, and then the larger independents, and finally all grocers put in full stocks of cigarettes of all popular brands. Because of the demands on the part of retail druggists that the sale of all drug products be confined to them, and woe to the one who seeks distribution outside the drug store, manufacturers in this industry have watched carefully developments such as the sale of cigarettes in grocery stores.

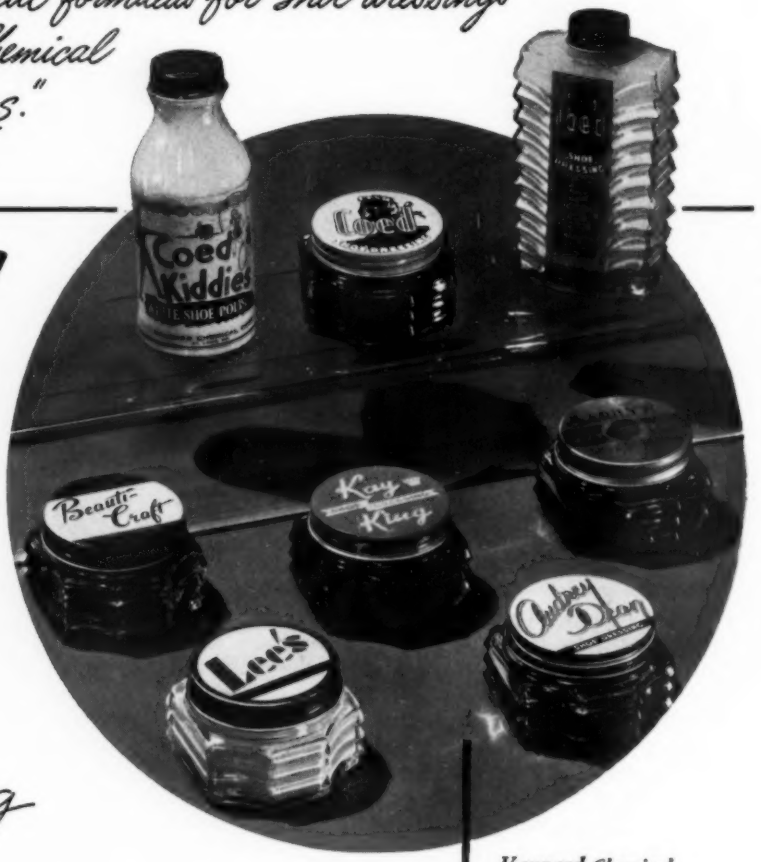
Now in a survey made by the Progressive Grocer, it is revealed that no less than 40 per cent of all cigarettes bought in this country are bought from grocers. This amounts to an annual volume of $1.4 billion, and accounts for over five per cent of the grocers' sales. Grocers find that cigarettes turn over from 50 to 75 times per year, contrasted to a turnover of 12 to 18 times per year for the entire grocery department, making for a low capital investment in terms of sales. An initial investment of $100 in cigarettes can produce $5,000 or more in sales per year.

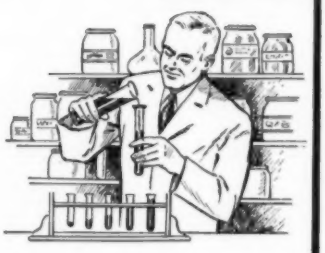
Is it any wonder that grocers generally are looking for other items which are bought regularly by the housewife? A small initial investment and rapid turnover, small display area, and other advantages are part of the picture which also applies to many drug and cosmetic items now being found right smack in the center of even our small local grocery stores.

Different types of shoes require different dressings and polishes. Developing special formulas for shoe dressings is where the Vangard Chemical Corporation "Shines."

"Shining" Examples

of scientific problem solving





***Vangard** Chemical Corporation of St. Louis, Missouri produces the "Coed" line of shoe dressings. The private label products shown are clients of Vangard. Note the attractiveness of the Crown Closures on the jars. These are lithographed by Crown in two or three sparkling colors.*

DIFFERENT types of products need special kinds of closures and liners, too. As an example, the closures used on these products are Crown Screw Caps with liners that have been *scientifically* selected to meet specific sealing needs. Crown Screw Caps also give greater sealing efficiency because of their patented Deep Hook Thread construction. This is the thread that assures easier application, and exerts greater sealing pressure without side scraping or binding.

Before deciding on a closure and liner for your product, talk to Crown. The facilities of our laboratories and the sealing knowledge we have acquired in working with manufacturers for a long period of years is at your disposal without cost or obligation. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's Largest Makers of Metal Closures.*

CROWN CLOSURES

Approved by millions of housewives

NEW PRODUCTS AND NEW PACKAGES

ABBOTT LABORATORIES are introducing Nembutal and Belladonna Elixir, a pleasant-tasting, mint-green, spice-flavored syrup for sedation and antispasmodic action, for the treatment of hyperactivity of the gastric cardia, pylorus, bile duct, colon or ureter. Nembutal relieves psychic tensions and the belladonna alleviates the spasm and diminishes the secretion of hydrochloric acid.

BRISTOL-MYERS COMPANY is distributing nationally Vitalis Hair Cream, a lighter-bodied cream tonic which is homogenized for easy flow. It is packaged in a handy shaker-top bottle.

CIBA PHARMACEUTICAL PRODUCTS, INC., is issuing Linguets containing 5 mg. of Percorten, the Ciba brand of desoxycorticosterone acetate. Elongated in shape, the linguet fits conveniently under the tongue and dissolves slowly, permitting almost 100 per cent of the hormone to be absorbed directly into the systemic circulation.

CUTTER LABORATORIES have made available a new blood typing serum, derived from pooled blood of healthy selected donors.

DERMETICS, INC., is including six new packages in its Christmas line in which the color scheme is coral, gold and white with touches of blue. The varied packages include a beauty-go-round platform of five basic skin-care products, a Plastic Travel Bottle for S. A. Cleanser and Hand Dressing, a flacon of the new perfume "Goddess of Crete," Christmas Red lipstick and 1199 perfume in gold-capped purse-vial, and the Dermetics "De Luxe Bath Set."

Dermetics has also announced a new stick-deodorant, B-FREE, which contains a new germicide and deodorant said to prevent perspiration odors instead of just masking them.

CASIMIR FUNK, INC., has prepared Tri-Sulfameth syrup, a mixture of equal parts of sulfadiazine, sulfamerazine and sulfamethazine as well as sodium citrate which is not contained in the Tri-Sulfameth tablets. This combination of sulfonamides is said to measurably decrease the incidence of renal crystalluria.

GOURIELLI has introduced a "Complete Face and Contour Treatment" in plastic bottles and vinylite container which includes Deep Emulsion Cleanser, Estrolar Cream, Estrolar Throat Oil, Five O'Clock Masque, Freshening Lotion, and Ermine Foundation.

THE HARROWER LABORATORY, INC., has made available Ensolbec-C for intensive parenteral treatment of Vitamin C and B-Complex deficiencies where rapid tissue saturation is desired. It is supplied in a combination package containing one 20 cc. size vial of Lyophilized Vitamin B-Complex with Ascorbic Acid and one 20 cc. vial of Sterile Diluent.

Another Harrower product is Prulose Complex for therapeutic correction of functional constipation in which dehydrated prune concentrate is fortified with an isatin derivative and combined with methylcellulose to produce activated moist bulk. Tablets are available in bottles of 100.

IVES-CAMERON COMPANY, INC., is distributing Oxsorbil Capsules, which produce more efficient choleresis and are indicated in chronic cholecystitis, noncalculous cholangitis, postcholecystectomy syndrome, biliary dyskinesia, without total obstruction to aid drainage of bile ducts and enhance fat emulsification.

KINNEY & COMPANY recently developed Emetrol, a phosphorylated carbohydrate solution for the control of vomiting due to common gastrointestinal disburbances. Among the common varieties of this disorder are epidemic vomiting in children and adults, regurgitation in infants, motion sickness, nausea caused by oral use of antibiotics, and nausea and vomiting of early pregnancy.

LEDERLE LABORATORIES have increased the vitamin B_{12} content of Perihemin Capsules, potent oral antianemia product, tenfold from 1.0 microgram to 10.0 micrograms of vitamins B_{12} and B_{12b}.

Lederle has also announced the use of the plastic "squeeze" bottle for the new and improved Sulmet Tinted Emulsion for the treatment of eye infections in animals. The emulsion is said to be highly effective for the treatment of many bacterial infections of the eye, including those that accompany "pink-eye" which is prevalent in cattle, sheep, and goats, and conjunctivitis and keratitis that are common in all animals.

PRINCE MATCHABELLI has introduced a new purse perfume-dispenser of the self-applicating type with a leakproof polished brass cap shaped like a crown. The dispenser holds a dram and a quarter. Matchabelli's Christmas suggestions include a Perfume Hat Box, similar to last year's, holding two perfumes, Stradivari and Duchess of York; a Cologne Collection of "six fragrances for every occasion," also repeated from last year; and "Two Loves," Stradivari and Crown Jewel Colognes Parfumees, presented in a gold box having royal blue lettering and accents, emblazoned with bold white crown.

THE NATIONAL DRUG COMPANY is adding to its biological line

See anything you like?

What's your product? If it's in the proprietary and toiletries fields, Continental has a first-rate container for it.

Our line includes slide-cover boxes in a variety of heights, and hinge-cover boxes in many sizes. We have round friction plug cans for miscellaneous household products, sifter top cans in round, oblong and oval shapes for all kinds of powders, as well as a wide assortment of round lock top cans—some with and some without inner seal—that are excellently adaptable to many dry products.

Only a few Continental cans are shown here. You'll find there are many, many more — and among them there may be just what you're looking for. Our lithographers are ready to turn out a job that will do your products proud. It costs nothing to talk things over — why not give us a call?

You can't beat Continental as a dependable source of supply!

CONTINENTAL CAN COMPANY

Eastern Division: 122 E. 42nd St., New York 17 Central Division: 135 So. La Salle St., Chicago 3 Pacific Division: Russ Building, San Francisco 4

Diphtheria-Tetanus-Pertussis Fluid, a highly concentrated fluid form of diphtheria and tetanus toxoids and pertussis vaccine, prepared without the use of alum, for simultaneous immunization against diphtheria, tetanus, and pertussis. The advantage is said to lie in the small dosage required. Three injections of 0.5 cc. each stimulate active immunity against diphtheria and tetanus and, at the same time, confer significant protection aginst pertussis.

THE NORWICH PHARMACAL COMPANY have announced the preparation of Ocusol Eye Drops (Isotonic) for daily eye hygiene, packaged in a one-fluid-ounce blue dropper bottle with carton.

PARKE, DAVIS & COMPANY is offering Camoquin, a new compound highly effective in the treatment of malaria, and Orygene, a chewing troche containing 10,000 units of crystalline potassium penicillin-G in each. Adequate dosage of Camoquin results in prompt disappearance of plasmodia from the blood stream and clinical recovery from acute attack. It is also said to be valuable as a prophylactic suppressive against acute attacks of malaria.

Orygene imparts therapeutically effective quantities of penicillin to the saliva, which, it is claimed, is beneficial in the treatment of Vincent's infection, gingivitis, secondarily infected cankers, and other infections of the mouth and throat.

PEARSON PHARMACAL COMPANY has announced the introduction of "Ennds," green tablets containing chlorophyll which eliminate both body and breath odors for a full day. The tablets are available in a 30-tablet package at $1.25.

THE PAUL PLESSNER COMPANY has introduced Amoryn tablets which contain a water-soluble mixture of conjugated estrogens or free estrogens extracted from pregnancy mare's urine, to be used for the control of severe menopausal symptoms.

REVLON is adding Aquamarine Bath Powder to its line in September, a delicate blue after-bath powder.

HELENA RUBINSTEIN is going to introduce a new lipstick tube design in October in the shape of a tiny gold telescope, as well as a completely new line of face and complexion soaps scented with the four popular Rubinstein fragrances.

Called the "Mirror Lipstick," the new tube has a tiny mirror at the large, or top end. It is well protected from breakage and suitable for cosmetic bags or small purses. The lipstick will come in all of the twelve Rubinstein lipstick colors, plus two new ones, Red Hellion and Blue Vixen.

The soaps will be scented with White Magnolia, Apple Blossom, Heaven-Sent, and Command Performance fragrances. Each fragrance will be differently colored.

SCHERING CORPORATION is ready to distribute Micropellets Oreton-F, an aqueous suspension of testosterone. The crystalline micropellets are rapidly absorbed from the saline solution to establish a depot of testosterone in the tissues; absorption begins promptly and continues for a long period. Micropellets Oreton-F is indicated in androgen deficiencies of the male.

E. R. SQUIBB & SONS have placed Pronestyl Hydrochloride on the market, a new drugwhich is said to be a powerful addition to the therapeutic agents hitherto available for treatment of cardiac conditions. This drug is claimed to be effective and safe to use in abolishing certain irregular rhythms of the heart known as "ventricular tachycardias." Pronestyl Hydrochloride capsules are supplied in bottles of 100 and 1000, while the solution is supplied in 10 cc. vials.

THE TILDEN COMPANY has placed an improved form of Mantrin on the market which contains Mannitol Hexanitrate, Rutin, and Phenobarbital. It brings about a rapid, gradual, sustained descent in blood pressure in essential hypertension through persistent relaxation of constricted blood vessels and is useful in modifying attacks of angina pectoris.

TUSSY COSMETIQUES is introducing Powder Pat, the new deluxe pressed powder, in a black and gold crown design compact, for September. Powder Pat is the regular deluxe face powder in pressed cake form, delicately perfumed with rose, jasmine and musk. It is matched perfectly to the corresponding DeLuxe Face Powders and will come in four fashion-right shades: Rosy Rachel, a deep rose rachel; Custom Blend, a subtle, rosy base rachel; Talisman, a medium pink tone; and Matchmaker, a soft, rich, rosy undertone.

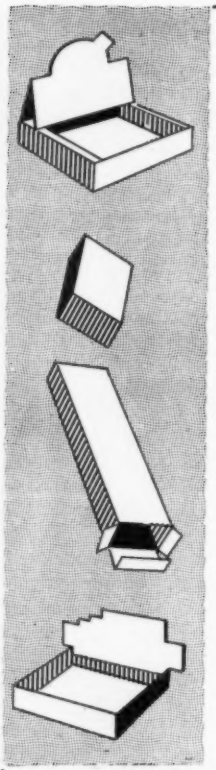
THE UPJOHN COMPANY has made available the following new sizes of Gelfoam, the sterile surgical sponge: Gelfoam Packs include size 2cm., designed particularly for nasal packing and size 6 cm., designed for application to large surface areas and packing cavities particularly in gynecologic and anorectal surgery; Gelfoam compressed sponges, size 100, which are designed primarily for application in the dry state; Gelfoam Dental Packs, for controlling bleeding and obliterating space in dental surgery; and Gelfoam Prostatectomy Cones, size 13 cm., for use with Foley bag catheter following prostatectomy, and size 18 cm.

W. B. ASSOCIATES have prepared New Softol Pedi-Kit, a complete pedicure which contains a jar of Pedicool cream to aid tired, burning feet, and a Pedikit Stick. The stick contains Sofna to lubricate cuticles and Groomer to remove cuticles without cutting.

HOUSE OF WESTMORE has introduced two new and highly flattering lipstick shades for fall and winter, aptly named Subtle Red and Subtle Pink, dressed in a gold-color case.

WINTHROP-STEARNS INC., is introducing to physicians a new 1 per cent solution of Isuprel hydrochloride. The original 0.5 per cent solution is being continued. The stronger solution is indicated in severe cases of bronchial asthma, while the weaker one is adequate for the mild or moderate cases.

Winthrop has announced a modification of the formula for Procaine Penicillin for Aqueous Injection. Added to the previous formula is a 1 per cent Sodium Citrate content which acts as a buffering agent.



FOLDING PAPER BOXES

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YOUR OWN FACTORY

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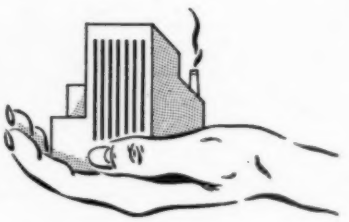

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3. **Prompt Delivery—to keep pace with an inventory conscious market.**

PLUS

'Round-the-clock complete service that conforms to all your packaging requirements. Our wide, most modern production methods are geared to fit your individual needs, and enable us to give you the same results you would expect from a carton plant all your own.

COMPARE *DISBROW* AND SEE THE DIFFERENCE!!

Write or phone today for samples. We welcome your inquiries.

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Bottle Caps
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Lipstick Containers --- Swivel, Slide, Automatic
Powder Boxes
Perfume Vial Cases and Caps
Lip Brushes
Dry and Paste Rouge Cases

and

Other Special Metal Products for the Cosmetic Industry

THE BRIDGEPORT METAL GOODS MFG. CO.

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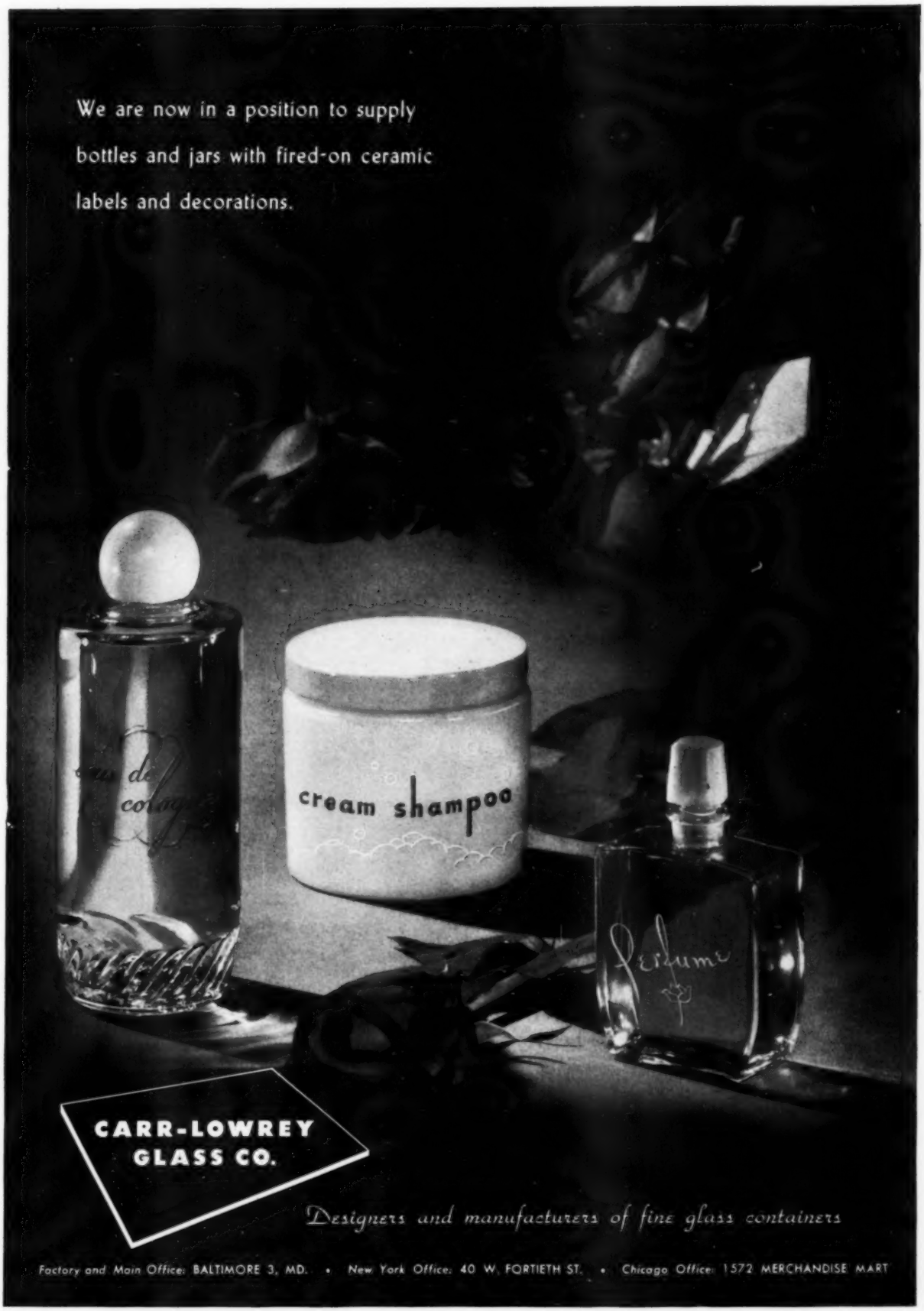
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labels and decorations.
cream shampoo
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And for Packaging it's GLASS

Nothing is more important in the packaging of your products than the protection of their purity, strength and other qualities. High in chemical durability, the glass package does not change your products. It will not leak, rust nor absorb moisture. Easy to open, easy to use, easy to reseal, it makes the most convenient package. The glass package may be transparent or not as required. It lends itself to individuality in size and shape, hence is adaptable to any product. Preferred by consumers because it is safe, sanitary and convenient . . . by retailers because of its sales and merchandising advantages. Select your source of supply for glass packages as carefully as you would a surgeon, attorney or other specialist. Anchor Hocking Glass Corporation, Lancaster, Ohio.

Anchorglass*

OVALS

For frequently used household products like oils and liquid detergents, attractive *Anchorglass* Ovals appeal to housewives. That's because these ovals are easy to hold, easy to open—to pour from—to reseal and store. You'll like *Anchorglass* Ovals for their outstanding production line performance. Uniform in all dimensions, smooth sides prevent twisting and jamming—flat bottoms prevent tipping. They're tough and strong because glass is evenly distributed. Proper annealing and constant tests and inspections keep them right. *Anchorglass* Ovals are available in crystal, green or amber glass, in 9 capacities from 1 to 32 ounces.

ANCHOR

PLASTICAP*

The *Anchor* Plasticap is distinguished by a patented liner retaining ledge and recess. This feature holds the liner permanently captive without the necessity for adhesives which frequently crystallize, release the liner and contaminate contents. It permits the use of full-size liners that completely cover the glass sealing surface. It prevents buckling, wrinkling or creeping of liners—permits their free rotation, thus preventing liner damage in application. And withal, Plasticaps are impervious to the action of most acids, alkalies, oils, alcohol and other destructive agents. *Anchor* Molded Caps are available in 7 sizes from 18 to 33 mm. Let us tell you more about the advantages and economies of *Anchorglass* Containers and *Anchor* Molded Caps.

*Reg. U. S. Pat. Off.

For the BEST in Glass Packaging *it's*

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"THE MOST FAMOUS NAME IN GLASS!"

The Handiest Bottle Ever Made!
Manufactured Under Pat. No. 2,515,093
Other Patents Pending
ELMER E. MILLS CORPORATION'S
Polyethylene
Plastic Bottle
This is *the* bottle with consumer appeals so strong they actually help sell your product!
It's unbreakable—a powerful consumer selling point on safety and thriftiness.
It's lightweight—takes up less space (and incidentally cuts your shipping cost).
It's a "squeeze bottle"—can be readily adapted to use as a stream—as a spray—as a sprinkler finish.
Our stock bottle is available in 1—2—4—8 ounce sizes. Through a special printing process we can print your label or design right on the bottle.
In addition to the production of this stock bottle and stock closure, we also custom make other thermoplastic bottles, closures and atomizers. You can depend upon their being made with the same high standards of craftsmanship which keynote all Mills plastic products.
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NEWS...

Named Exec. V.P. by Sterling Drug

Dr. J. Mark Hiebert was elected to the newly created post of executive vice-president of Sterling Drug Inc. by the board of directors, according to James Hill, Jr., chairman and president. Associated with the company since 1934, Dr. Hiebert has been a vice-president since 1945, assistant to the president in the management of the business since 1947, and a member of the board since May, 1949.

DR. J. MARK HIEBERT

Lander Purchases Loveland Co.

Lander Company, Inc., has purchased the complete line of the William H. Loveland Company, Inc., Binghamton, according to George Oestreich, vice-president of Lander. William H. Loveland, president of the company bearing his name, is retiring from active business life. Lander will continue to ship the merchandise from Binghamton, and also from St. Louis, where a Lander plant is in operation.

The Loveland line includes the Old English and Speedee trade names, and products such as face and hand creams, brushless shaving creams, after-shave lotion, and allied items.

D'Amico Appointed by Fritzsche

Gerald N. D'Amico has been appointed manager of the Boston branch of Fritzsche Brothers, Inc. succeeding the late Harry P. Bowra, according to F. H. Leonhardt, president.

Appointed by Armour Foundation

Dr. G. Harvey Benham has been named supervisor of biochemistry at Armour Research Foundation of Illinois Institute of Technology

Luncheon to Honor Dr. Newcomb

Special honor is to be paid to Dr. Edwin L. Newcomb, executive vice-president of the National Wholesale Druggists Association, at a luncheon to be held at the Waldorf-Astoria Hotel, New York, on Wednesday, September 20. The luncheon, which is completely independent of the N. W. D. A., is being held on the day immediately following the adjournment of the annual meeting of the N. W. D. A. at the same hotel so that Dr. Newcomb's out-of-town friends may conveniently attend.

At the luncheon it is planned to present Dr. Newcomb with some tangible gift as a token of the esteem in which the industry holds him. Of the money contributed for this purpose, the committee will apply the balance to some educational or related plan bearing the title of "The Edwin Leigh Newcomb Fund" to be established in accordance with his own wishes.

EDWIN LEIGH NEWCOMB

A small committee is acting for all the associations in the drug, chemical, cosmetic, pharmacy, and chain branches which are sponsoring the affair. Those wishing to attend the luncheon may send checks for $10 per place, with a table of ten necessary to reserve seats. Contributions for the Fund, which may not exceed $100 each, are separate from the tickets for the luncheon. Any friends who wish to join in this tribute to Dr. Newcomb either by attendance at the luncheon, or contribution to the Fund, or both, should mail their returns to S. B. Penick Sr., Fund Custodian, 50 Church St., New York 7.

Conti Merged with J. B. Williams

Conti Products Corp., Brooklyn, N. Y., has been merged with the J. B. Williams Company, Glastonbury, Conn., according to Charles L. Huisking, president of Conti.

Named Superintendent by Tilden

Robert K. Peck, chief chemist of Tilden Laboratories, has been made superintendent, according to W. Gordon Cox, president, the Tilden Company. Mr. Peck succeeds Dr John O'Neill Closs, who recently became executive secretary of the American Pharmaceutical Manufacturers Association.

Mackinnon Named Sales Manager

Barclay E. Mackinnon has been appointed general sales manager of the New York Quinine & Chemical Works, Inc., according to Francis J. Reid, executive vice-president. He will act directly under Mr. Reid in general organizational matters and will be largely concerned with the development of N.Y.Q. sales to the pharmaceutical and other industries. In this connection Mr. Mackinnon will coordinate sales efforts in conjunction with R. P. Neptun, vice-president in charge of field sales.

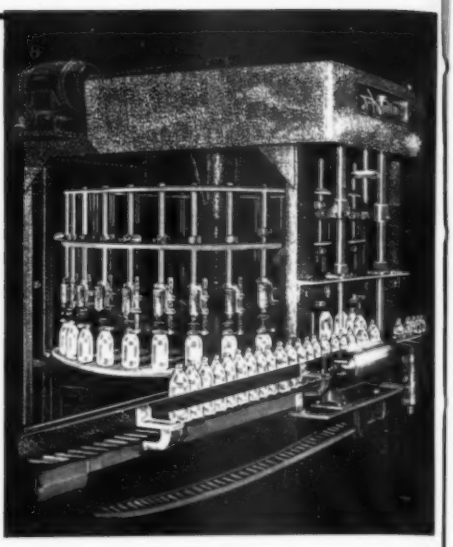
BARCLAY E. MACKINNON

Mallinckrodt Adds to Staff

Dr. August H. Homeyer was recently elected a director of Mallinckrodt Chemical Works, while the following were named vice-presidents: Dr. John R. Ruhoff, Norman P. Knowlton, and Harold E. Thayer. Additional officers elected include John E. Gaston as secretary; John G. Moore, assistant treasurer and assistant secretary; and Russell F. Ritschy, assistant secretary.

Sharp & Dohme Building New Plant

Construction of the New Orleans branch of Sharp & Dohme, Inc. has been started, according to Elmer W. Metzger, director of domestic branches, and is expected to be ready for occupancy about October first. Centrally located at Jefferson Davis Parkway and Palmetto Street, the new headquarters will replace the present office and warehouse facilities at 516 Commerce Street.



Finer service for you through concentration

on fewer fine chemicals

One of our specialties:

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You are served better and *in more ways* when we keep our production of fine chemicals to less than one hundred.

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Concentration enables us to offer Ammonium Chloride to you as a dual-purpose product. It is physically uniform—made in the proper range of particle size to permit direct compression into tablet form or to go into solutions quickly. This dual-purpose feature eliminates duplicate inventories for you, and helps reduce your production costs.

Concentration enables us to offer you an Ammonium Chloride whose chemical purity is precisely controlled from raw materials to finished product. It is produced in stainless steel equipment as an added safeguard to purity.

Whatever your requirements for Ammonium Chloride—call on Baker. Samples and prices will be forwarded gladly upon request. Address: *Fine Chemical Division*, J. T. Baker Chemical Co., Phillipsburg, N.J.

Baker's Chemicals

C. P. ANALYZED • FINE • INDUSTRIAL

ANALYZED REAGENTS — Baker's — FINE CHEMICALS

Central Pharm. Co. Elections

Dr. Richard H. Berry was named vice-president in charge of research and Andrew J. Stiles, vice-president in charge of sales, of the Central Pharmacal Company, at the recent annual board of directors meeting. Neal

JOSEPH H. BERRY

ANDREW J. STILES

Hennessy was elected assistant secretary-treasurer and will act as comptroller, while W. C. Ross was re-elected vice-president, and Joseph H. Berry, director of production.

Robin Pharm. Becomes Corporation

The Robin Pharmacal Company on July first became the Robin Pharmacal Corporation. Sidney Rich was elected president; John Gonzalez, vice-president; and Max Smedrasman, secretary and treasurer. All business policies of the concern will remain unchanged.

New D & O Sales Positions

Two new sales management positions have been established in the Dodge & Olcott sales department, according to J. F. Rudolph, president. Paul N. Sperry has been appointed sales manager and Arthur L. Dowling, advertising and sales promotion manager. They will both be under the direction of Charles O. Homan, vice-president in charge of sales.

U.S.I. Expands Detergent Production

U. S. Industrial Chemicals, Inc. has announced that a new production unit for the manufacture of a lauryl sulfate detergent is nearing completion in Baltimore and will be in operation in late summer. This liquid detergent, currently offered under the trade name of Sipon L-20, is the first surface active agent marketed by U.S.I. as the result of a broad detergent development program undertaken jointly by the company and Societe Sinnova, of Paris

Evans Names Kramer V.P. of Sales

R. A. Kramer was elected vice-president in charge of sales of Evans Chemetics, Inc. at a recent meeting of the board of directors. He has been sales manager of the corporation for the past nine years.

ROBERT A. KRAMER

Cortney on Fair Trade Committee

Philip Cortney, president of Coty, Inc., has been named a member of the Steering Committee of the Bureau of Education of Fair Trade, according to Dr. John W. Dargavel, chairman of the bureau. Mr. Cortney has replaced Paul H. Douglas, former president of Bourjois, Inc., who recently retired from business due to ill health.

Upjohn Injunction Against Blackman Corp.

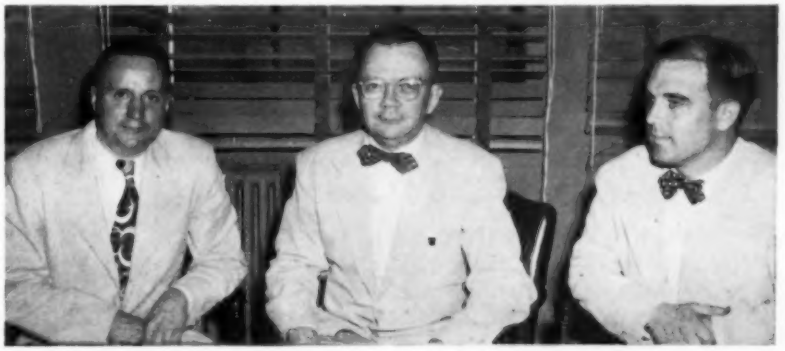
The Upjohn Company has obtained a permanent injunction against the Julius Blackman Corporation (Supreme Pharmaceutical Company), which was issued by the United States District Court, Southern District of New York. The Corporation has been permanently enjoined from selling, offering for sale, or advertising any liver or iron compound, or vitamin preparation in green capsules, or any red-coated tablet containing ascorbic acid and B vitamins without significant quantities of other active principles. The Julius Blackman Corporation has further been enjoined from representing that its liver, iron, and vitamin preparations are identical with Upjohn's product Ferrated Liver and that its tablets containing ascorbic acid and B vitamins are identical with Upjohn's product Cebefortis.

The injunction also restrains the Supreme Pharmaceutical Company from representing that any of its preparations may be palmed off as, or substituted for, any Upjohn preparation, without the knowledge of the ultimate purchaser, and from assisting others to substitute by supplying preparations simulating the combination of formula, size, shape and color originated by Upjohn for any of its preparations. The defendant was ordered to pay the Upjohn Company its profits on sales of its items capable of substitution for Ferrated Liver and Cebefortis.

Schmidt Appointed by Schering

Arthur M. Schmidt, formerly mid-Atlantic district supervisor of Schering Corporation's eastern division, has been appointed eastern division supervisor, according to Dr. John N. McDonnell, vice-president. He will be succeeded by J. Roger Cox as mid-Atlantic district supervisor.

Paul Sperry (left), who has been appointed sales manager of Dodge & Olcott, and Arthur L. Dowling (right), newly appointed advertising and sales promotion manager. Both men will be under direction of Charles O. Homan (center), vice-president in charge of sales.



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A NORDA ORIGINAL makes every new product *uniquely yours.* Here's your own different odor that makes each of your products distinctive.

There's a modern, lingering, spicy bouquet about A NORDA ORIGINAL. Smart women like the fragrance. Smart women are buying colognes, toilet waters, creams, lotions, lipsticks, deodorants, soaps, and many a new exciting perfume created with A NORDA ORIGINAL.

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Health Foundation Meeting

The advisory committee of executives of Drug Trade and Allied Associations and the advisory committee of Allied Industry Publications met with Admiral William H. P. Blandy, president, and members of the Health Information Foundation at the University Club last month to review the aims of the Foundation and the current projects.

Present at the joint session among the advisory committee of executives of the Drug Trade and Allied Associations were: chairman, Dr. Frederick J. Cullen, executive vice-president, Proprietary Association; Karl Bambach, assistant executive vice-president, American Drug Manufacturers Association; E. Allen Newcomb, secretary, National Wholesale Druggists Association; Dr. J. O'Neill Closs, executive secretary, American Pharmaceutical Manufacturers' Association; Ray C. Schlotterer, executive secretary, Federal Wholesale Druggists Association; Carl Willingham, secretary and treasurer, National Association of Chain Drug Stores; and S. L. Mayham, executive vice-president, the Toilet Goods Association, Inc.

Those members of the advisory committee of Drug Trade and Allied Industry Publications who attended the session were: chairman, Dr. Robert L. Swain, editor, Drug Topics; J. C. Helenore, Chain Store Age; Thomas R. Farrell, editor, DRUG AND COSMETIC INDUSTRY; Wallace Werble, editor, F-D-C Reports; O. P Willoughby, publisher, Drug and Allied Industries.

Members of the Health Information Foundation included Admiral Blandy; Kenneth Williamson, executive secretary; and Martin Kane and Ralph Hartell, J. Walter Thompson Company.

Complete Armstrong Training Course

Seven members of the Armstrong Cork Company's Glass and Closure division sales training class have completed training at the company's home offices and have been assigned to positions throughout the country. Frank S. Craig, Jr. has been assigned to Atlanta; DeWitt B. Kelly, to Minneapolis; Eric G. Larson, Cincinnati; William L. Martin, Jr., Pittsburgh; John J. Quinn, Dallas; John M. Smith, Detroit; and Robert N. Standish, Jr., New York. James A. Smith, formerly in Pittsburgh, has been transferred to Atlanta, and William H. Powers has been assigned to the St. Louis office as a salesman.

Attending a meeting of the Health Information Foundation at the University Club last month are, right to left: Kenneth Williamson, executive secretary of the Foundation; Admiral William H. P. Blandy, president; Martin Kane and Ralph Hartell, both of J. Walter Thompson; E. Allen Newcomb, secretary, NWDA; Carl Willingham, secretary and treasurer, National Association of Chain Drug Stores; Thomas R. Farrell, editor, DRUG AND COSMETIC INDUSTRY, J. C. Helenore, Chain Store Age; Karl Bambach, assistant executive vice-president, ADMA; Ray C. Schlotterer, executive secretary, FWDA; Dr. Robert L. Swain, editor, Drug Topics; Dr. Frederick J. Cullen, executive vice-president, Proprietary Association; Dr. J. O'Neill Closs, executive secretary, APMA; and O. P. Willoughby, publisher, Drug and Allied Industries. Not shown in the picture are Steve L. Mayham, executive vice-president, the Toilet Goods Association, and Wallace Werble, editor, F-D-C Reports.

Bergfeld Appointed by Smith-Dorsey

E. A. Bergfeld has been appointed division manager of the Smith-Dorsey Company, with headquarters in Memphis. He will supervise the states of Kentucky, Tennessee, Arkansas, Louisiana, Mississippi and Alabama.

E. A. BERGFELD

Urban Appointed by Bristol-Myers

Joseph H. Urban has been appointed comptroller of Bristol-Myers products division, Bristol-Myers Company, according to Robert B. Brown, vice-president and general manager of the division.

JOSEPH H. URBAN

Pulva Appoints Representatives

The Pulva Corporation has appointed two new sales representatives, Chemical Pump & Equipment Corporation, 75 West St., New York, and the Miller Sales Company, 201 N. Wells St., Chicago. The former will cover metropolitan New York and the eastern half of New York State, together with parts of New Jersey, Connecticut, and Massachusetts; the latter will cover Northern Illinois, northwestern Indiana, eastern Iowa, and all of Wisconsin.

Bellin-Wonderstoen is Expanded

Bellin-Wonderstoen is now represented throughout the United States and Canada, for the first time in five years, according to Fred S. Foster, sales manager. Three new representatives have been engaged, including Roberta Wilson, who will cover the southern territory; George W. Barbat, the southwest; and Henry G. Waldhauser, who will cover territory in New Jersey, Pennsylvania, Maryland, Delaware, and Virginia.

NEWS FLASHES ON PLAXPAK

SKOL MAKES THE SUN a gentle skin specialist . . . converts sun-burners into sun-worshippers. And now it's packaged in the unbreakable Plaxpak bottle. Lighter and safer to pack and carry, the Plaxpak bottle makes Skol more convenient than ever to use.

TRIQUE SHAMPOO is an economical family shampoo that lathers freely in hard or soft water and gives the hair a high sheen and lustre. It's in unbreakable Plaxpak bottle that can be held firmly with soapy hands and is ultra-safe with squirming infants.

ALEXANDRA de MARKOFF'S Fragrant Fern Hand Dew leaves the hands feeling as if they were caressed by a cool summer morning's breeze. And it's easy, neat and economical to dispense, because it's in the unbreakable Plaxpak bottle. Just a light squeeze.

ABSOLUTE PROTECTION AGAINST RUST for guns is provided by the Rust-Pruf Gun Pouch, a product of the Hood Company, Los Angeles, Cal. Pouch is made of Plaxpak polyethylene film, selected because of its uniformity and freedom from pin holes.

NOREEN SUPER COLOR RINSE can be applied evenly and conveniently in three minutes. Advantages of the Plaxpak bottle are responsible. User simply guides applicator tip on the bottle into the hair and then squeezes the bottle. Application is neat, quick and easy.

REVOLUTIONARY NEW "ROTUBE TWISTUBE" combines advantages of a rigid jar and collapsible metal tube. User twists bottom of the container. Inner sack of Plaxpak polyethylene film forces a measured amount of cream through an orifice at the top.

★ In addition to its packaging products, Plax makes a wide variety of thermoplastics in rod, sheet, tube, and other forms.

Lighter, safer and smarter packaging . . . in sum, these are the reasons why more and more products are appearing in the Plaxpak bottle. Here is a container that becomes a part of the product, that adds unique and specific use advantages to make the product still more salable. And package designers everywhere are excited over the new design possibilities. You can have more details by writing for our catalog on your company letterhead.

PLAX BLOW-MOLDED PRODUCTS ARE MADE UNDER THE FOLLOWING U. S. PATENTS 2128239, 2175053, 2175054, 2230188, 2230190, 2260750, 2283751, 2349176, 2349177, 2349178

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Amer. Pharm. Co. Appoints

Leon E. Kachurin, son of the founder of the American Pharmaceutical Co., the late Philip Kachurin, has been elected as secretary and treasurer of that company, while Russell J. Muckle has been appointed sales manager. Mr. Muckle was formerly associated with Frederick Stearns, division of

LEON E. KACHURIN

RUSSELL J. MUCKLE

Sterling Drug and vice-president and sales manager of the Chapin Co. He was also export sales manager of Sharp & Dohme and vice-president of Sharp & Dohme International.

Ansbacher Moves Chicago Office

Ansbacher-Siegle Corporation has announced the removal of its Chicago office from 3204 North Oakley Ave. to 139 North Clark Building, 139 North Clark Street, Chicago 2. Three Ansbacher-Siegle staff color consultants, Harry M. Coty, Paul L. Messerschmitt and O. W. Sommerhalter, will be available to the midwest trade from the new Chicago office.

Promoted by Abbott Labs.

Milt H. Freeland and John Keliher have been named managers of new sales districts for Abbott Laboratories with headquarters in Indianapolis and Boston, respectively, according to H. S. Wilkinson, director of sales.

Kohnstamm Honors 265 Employees

H. Kohnstamm & Co. awarded service buttons to 265 members of the organization last month, who had completed five or more years of service. In the form of jewel-studded buttons and pins, the awards were gold-mounted with embossed figures showing the number of years of each individual in 5-year intervals up to 50 years. Wm. A. Schnakenberg and Charles D. Allen received the 50-year buttons.

In making the awards, President Louis J. Woolf said, "This year H. Kohnstamm & Company will celebrate its 100th anniversary, an event made possible through the cooperative effort of many loyal workers, past and present.

"This occasion seems like a fitting time to give recognition to these splendid records of loyalty to our institution, and a tangible expression of appreciation from the management. While the intrinsic value of these awards is not great, the things they represent are priceless. They are symbolic of the faith in and loyalty to an ideal that has endured for 100 years, ever since this company was founded and which they, as recipients of this award, have helped to perpetuate."

New Merck Branch in Mexico City

Merck (North America) Inc. has established a branch in Mexico City which will carry a select accommodation stock of vitamins, including the anti-anemia vitamin B_{12}, penicillin, streptomycin, among others, Juan C. Nolan, formerly representative of Merck (North America) Inc. in Mexico, is manager of the new branch.

Walgreen Buys Whittier Labs.

The Walgreen Company, which has had a partnership interest in Whittier Laboratories for a number of years, obtained full ownership of Whittier last month. The production facilities of the laboratories have been consolidated with Valentine Laboratories, a Walgreen subsidiary.

Leo C. Hoffman, who will continue as president and general manager, stated that the executive and general offices of Whittier and Nutrition Research Laboratories will be moved on September first to the Palmolive Building, 919 North Michigan Ave., Chicago 11. Research, manufacturing facilities, and warehousing operations will be located at 4748 South St., Chicago 32.

U. S. Alcohol Plant Sold

The surplus Government alcohol plant at Omaha, Neb., has been sold to Central-States Corporation, Chicago, and will be used to produce 22,000,000 gallons of industrial alcohol annually.

General Services Administration said the plant was sold for $1,750,000. The national security clause is a part of the transaction so the plant can be taken back in the event of an emergency.

The new owners, the administration said, will produce alcohol at the plant's rated capacity. It added that the plant cost the Government $6,278,000. It was formerly operated by the Farm Crops Processing Corporation.

Sales terms were 20 per cent cash and mortgages for the remainder, payable in equal quarterly installments for fifteen years with interest at 4 per cent.

Dr. Roger Firmenich with elephant he bagged on recent hunting trip to Lake Tchad, Africa.

Quotations on Oil NEROLI are sharply higher and we recommend the use of

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GRASSE (A. M.) FRANCE — ARGENTEUIL (S. & O.) FRANCE

Robinson Wagner Staff Changes

John C. Robinson, formerly engaged in research and development work for Robinson Wagner Co., and a director since 1944, has been named vice-president in charge of production at the Mamaroneck plant. Additional changes

JOHN C. ROBINSON

JOSEPH C. PICKARD

in the staff include Joseph C. Pickard, who has been elected secretary and a director; Arthur A. Mulligan, formerly with Lehn & Fink Products Corp., who has been named assistant to the president and assigned to market research; and the appointment of Robert C. Marshall as sales representative for the Philadelphia area.

Chan Visits Schering Home Office

Leonard Chan, supervisor for China and Hongkong operations of Schering Corporation, recently visited the home offices for consultation with Jay R. Hunt, Schering's international division manager, on marketing problems in the Far East.

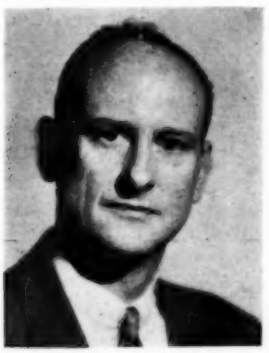
Abbott Labs. Opens New Branch Office

Abbott Laboratories has opened a new branch office at 628-38 E. Erie Ave., Philadelphia with Charles Moyer as branch manager and C. E. Fenger, office manager.

Fox Named Schering Treasurer

Mortimer J. Fox, Jr. has been elected treasurer of Schering Corporation, according to Francis C. Brown, president. He succeeds C. F. Eurich, who recently retired after having served the company in that capacity for 12 years.

ARTHUR A. MULLIGAN



ROBERT C. MARSHALL

"Code-O-Matic" Trade Name Approved

New Jersey Machine Corporation was granted the right to use the trade name "Code-O-Matic" by the patent office, according to a six-page hearing report dated May 15, 1950, in which Joseph E. Daniels, assistant commissioner of the United States Patent Office, denied appeal made in the name of J. L. Ferguson Company to restrict the corporation from using the word.

Lima Mgr. of Sharp & Dohme Branch

Eusebio Lima has been appointed manager of the new Sharp & Dohme branch in Caracas, Venezuela, according to W. B. Wimpenney, president of the Sharp & Dohme Inter-American Corporation. Mr. Lima has had 13 years' experience with Sharp & Dohme products, the last seven in Venezuela where he has supervised all the company representatives in that country. The new branch office was recently opened in order to provide better service to customers in Venezuela.

A. Gross Builds New Laboratory

A Gross & Company recently completed a modern laboratory building at their main plant in Newark, N. J. The modern structure has been functionally designed and equipped with the best apparatus available for the control, development and technical servicing of fatty acids. Raymond E. Wiech will head an enlarged technical staff.

Hooker Appoints

Joy E. Beanblossom was made manager of development of the Hooker Electrochemical Company during recent organizational changes. Additional appointments include James S. Sconce as manager of research; Dr. Bruno H. Wojcik as assistant to the technical superintendent, and James S. Walker as supervisor of technical sales service.

Tombak Transferred to Wilmington

George J. Tombak, since 1934 a technical salesman in the New York office of the du Pont Company's Fine chemicals division, has been transferred to Wilmington as a technical adviser and consultant to du Pont aromatics customers.

Oloffson With Ives-Cameron

Olaf Oloffson has joined the staff of Ives-Cameron Company, Inc. as advertising manager.

New branch office of Abbott Laboratories in Philadelphia comprising 17,000 square feet of space. Domestic branches now number nineteen.

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Heyden Benzaldehyde measures up to the most rigid laboratory standards of purity and uniformity—whether used as an odorant, flavor ingredient, or an intermediate in the manufacture of essential oils, dyes and pharmaceuticals.

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PROPYL GALLATE
METHYL BENZOATE
ETHYL BENZOATE
SODIUM BENZOATE
PARASEPTS
FORMIC ACID
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Parahydroxybenzoates • Penicillin • Pentaerythritols • Propyl Gallate
Quadrafos • Salicylates • Salicylic Acid • Streptomycin

Essential Oils in Guatemala

The production of citronella and lemongrass oils in Guatemala has progressed to such a marked degree, according to Julian W. Lyon and Harold A. Southern, sole United States agents for Oficina Controladora in Guatamala, that should oil shipments be cut off from the Far East because of continued international difficulties, it is reasonable to assume that Guatemala would be able to supply the demand for these oils in the United States.

The development in Guatemala has been noteworthy. In May of 1948, the Oficina Controladora de Aceites Esenciales was formed to handle the exclusive exports of these oils. This Control Office is, in effect, a cooperative consisting of individual growers desirous of maintaining standard quality of oils and unifying their efforts in efficient production and effective distribution.

In May 1950, the Control Office celebrated its second birthday. Today there are 58 members. Each grower delivers his oil to the Cooperative warehouse. A sample is extracted from each drum and tested according to Essential Oil Association standards. Batches of 10 drums are emptied into a blending tank where the oil is filtered and then returned to carefully inspected drums, thereby assuring a clean uniform quality.

The Contro' Office is administered by a President and a Board of Directors consisting of individual growers, all of whom are elected semi-annually by the membership. The directives and policy of the Board are executed by a General Manager, Mr. Franz J. Ippisch, who has been largely responsible for creating an efficient and smooth-running organization.

All available data concerning agricultural and distilling problems is available to Oficina members who are in the enviable position of devoting their entire efforts to more efficient and economical production methods rather than sales problems. The Control Office handles all sales, attends to shipping details and renders a complete accounting to the individual grower for his particular shipment.

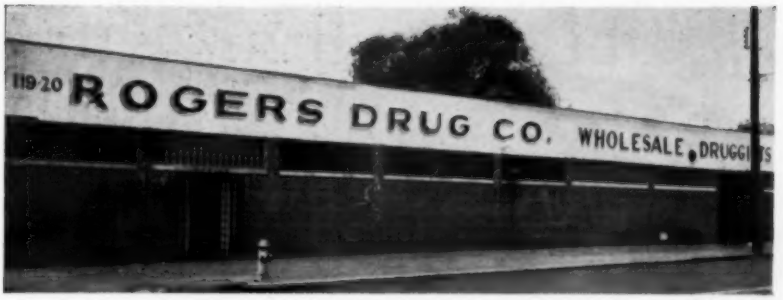
The sole United States agents for Oficina, Messrs. Julian W. Lyon and Harold A. Southern of New York, recently returned from one of their frequent visits at which time they attended the second anniversary meeting.

They also visited the new modern building of the Oficina now nearing completion, which will house the executive and general offices and a fully equipped testing and research laboratory.

Production has increased steadily with the United States receiving the greatest portion. During 1949, Guatemala shipped to the United States 676,625 lbs. of Citronella—more than any other country—and 116,596 lbs. of Lemongrasss Oil.

It is the aim of the Control Office to obtain seedlings and root stock of other essential oil plants, also spices, in order to foster the development and growth of those items imported from other continents, principally the Far East. Cooperating in this work is the Instituto Agropecuario Nacional organized through Foreign Agricultural Relations by the Department of Agriculture in Washington. Several experimental fields have been established on the Pacific Coast of Guatemala where careful experiments are being carried out for the improvement of existing agricultural products and the introduction of new plant material.

Progress has been made and it should be gratifying to those in the perfume, soap, cosmetic and spice industries that a progressive unified group of growers in Guatemala are diligently and patiently working to establish other products. The success of such a program in a nearby republic—five hours by plane from New Orleans—adds to our hemisphere solidarity and gives new hope to the aromatic and spice industries in this country.



New building addition to Rogers Wholesalers Inc., located at Jamaica, N. Y., which enables company to increase service to retail druggists.

Schering Div. Managers Confer

Plans were formulated for the streamlining and expansion of Schering's domestic sales operations at a recent conference at the home offices under the direction of Herman W. Leitzow, domestic sales manager. Among those who spoke at the division managers meeting were Francis C. Brown, president, and Dr. John N. McDonnell, vice-president.

Rogers Completes New Addition

Rogers Wholesalers Inc., Jamaica, N. Y., have completed construction on a new building addition which will enable the company to service 1000 drug accounts, according to Nat E. Schulman, president. The one-story building is constructed of brick with Insulux glass block decoration and is protected against fire through an automatic sprinkler system with additional protection by direct wire and a central control station.

Felton Hooks Three Marlin

Robert E. Felton, western manager of Felton Chemical Company, went fishing off the California coast recently and caught one of the largest marlin ever hooked by any one in the drug and cosmetic industry. He managed to catch three of them in six days, the largest, a 157-pounder.

DPi offers tocopherol concentrates

at the lowest price

per international unit of vitamin E

now...
with no increase in price per International Unit, DPi tocopherols are available in new, higher concentrations.

They help meet today's demand for more and more activity in less and less oil.

new type 6-35
This Distilled Vitamin E Concentrate gives you in each gram 350 milligrams of *d*, alpha-tocopheryl acetate—equivalent to 476 International Units of vitamin E.

new type 4-40
This Distilled Concentrate of Mixed Tocopherols gives you in each gram 400 milligrams of mixed *d*,tocopherols—at least 200 milligrams in the form of *d*, alpha-tocopherol.

DPi also supplies Distilled Vitamin E Concentrate, Type 6-25, containing 250 mg. of *d*,alpha-tocopheryl acetate per gram, and Distilled Concentrate of Mixed Tocopherols, Type 4-34, containing 340 mg. of mixed tocopherols per gram.

For prices or more complete information, write Distillation Products Industries, 791 Ridge Road West, Rochester 3, N. Y. (Division of Eastman Kodak Company). Sales Offices: 570 Lexington Ave., New York 22, N.Y. • 135 South La Salle St., Chicago 3, Ill. • Gillies & Loughlin, Los Angeles and San Francisco • Charles Albert Smith, Ltd., Montreal and Toronto.

Leaders in vitamin E and natural and synthetic vitamin A.

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Rax Powder Ready For Distribution

Rax Powder, a new rat and mouse killer containing the chemical warfarin (W.A.R.F. Compound No. 42,) has been released for general consumer sale following the completion of hundreds of field tests carried out since Sept. 1949 in a nationwide program under a permit of the Production & Marketing Administration, U. S. Department of Agriculture. Rax Powder is manufactured and distributed by R. J. Prentiss & Co., Inc., 110 William St., New York 7, which participated in the large-scale testing program.

The new rat and mouse killer, RAX containing warfarin, kills by producing hemorrhage. It is a slow acting poison and must be consumed by the rodent over several days time to kill. Warfarin, in the concentrations used in the baits, is tasteless and odorless to the rodent. Rats and mice do not develop bait shyness to the product and continue eating bait containing it until enough has been consumed to cause death. As a result, Rax will, in most cases, successfully control a rat and mouse population and then serve to prevent a rebuilding of that population by killing newcomers as they arrive.

Rax is now available to the trade for professional use, for packaging under private label for consumer use or for manufacture into prepared baits.

The field tests show outstanding results in the use of Rax in the killing of rats (both Norway and roof rats) and mice. Of all tests reported, 85-90 per cent show complete or satisfactory results in the killing of rats and mice. Tests were carried on by the Fish & Wildlife Service of the U. S. Department of Interior, the U. S. Public Health Service, city and state health departments, professional exterminators and individual farmers and householders. The product was tried in almost every conceivable type of premises infested with rodents, including farms of all types, homes, apartment buildings, stores, restaurants, warehouses and manufacturing plants of different sorts. Geographically, the rodenticide was used in practically every state in the union, Canada, Hawaii and in several other foreign countries. Many reports showed complete elimination of rats and mice where all other poisons tried had failed.

An outstanding advantage of warfarin rodenticides is their relative safety as respects humans, pets and domestic animals. Out of the several hundred test reports received, no case of accidental poisoning of a human was reported. Comparative safety of warfarin products results from the fact that they are relatively non-toxic in single doses. Danger of a child, pet or domestic animal actually taking warfarin rodent baits *several times* over a number of days is relatively minor.

Warfarin is protected by a patent owned by the Wisconsin Alumni Research Foundation. R J Prentiss & Co., Inc., will handle the distribution of warfarin rodenticides in various fields.

The large scale testing program on warfarin rodenticides was conducted jointly by R J Prentiss and the Wisconsin Alumni Research Foundation in cooperation with the Production and Marketing Administration of the U S Department of Agriculture, the Fish & Wildlife Service of the U S Department of Interior, the U. S. Public Health Service and the National Pest Control Association. The program is the first in which users of rodenticides were requested to report results achieved.

Left to right, H. O. Breuer, representative for Syntomatic Corp. for Central America and Caribbean area, with Irving Bennett and Dr. Victor Fourman, Syntomatic executives. Mr. Breuer, who with his wife, is visiting the United States, attended a series of conferences and market developments relative to Syntomatic.

Return to Amer. Coating Mills

Donald R. Earl and Richard W. Lindquist have rejoined the New York office of American Coating Mills, division of Owens-Illinois Glass Co., according to J. C. Hendricks, general sales manager of the division. Both men will serve in sales representative capacities.

Cain Appointed by McNeil Labs.

Dr. Cornelius K. Cain has been appointed manager of the department of organic chemistry, division of medical sciences of McNeil Laboratories. He will direct the synthetic organic research activities of the company.

DR. CORNELIUS K. CAIN

Resigns from Amer. Druggist

Bernard Zerbe, managing editor of American Druggist for the past eight years, resigned August first to become a vice-president of Murray Breese Associates, Inc. Prior to joining American Druggist he served for a year and a half as assistant to the secretary of the National Association of Chain Drug Stores, the late F. J. Griffiths.

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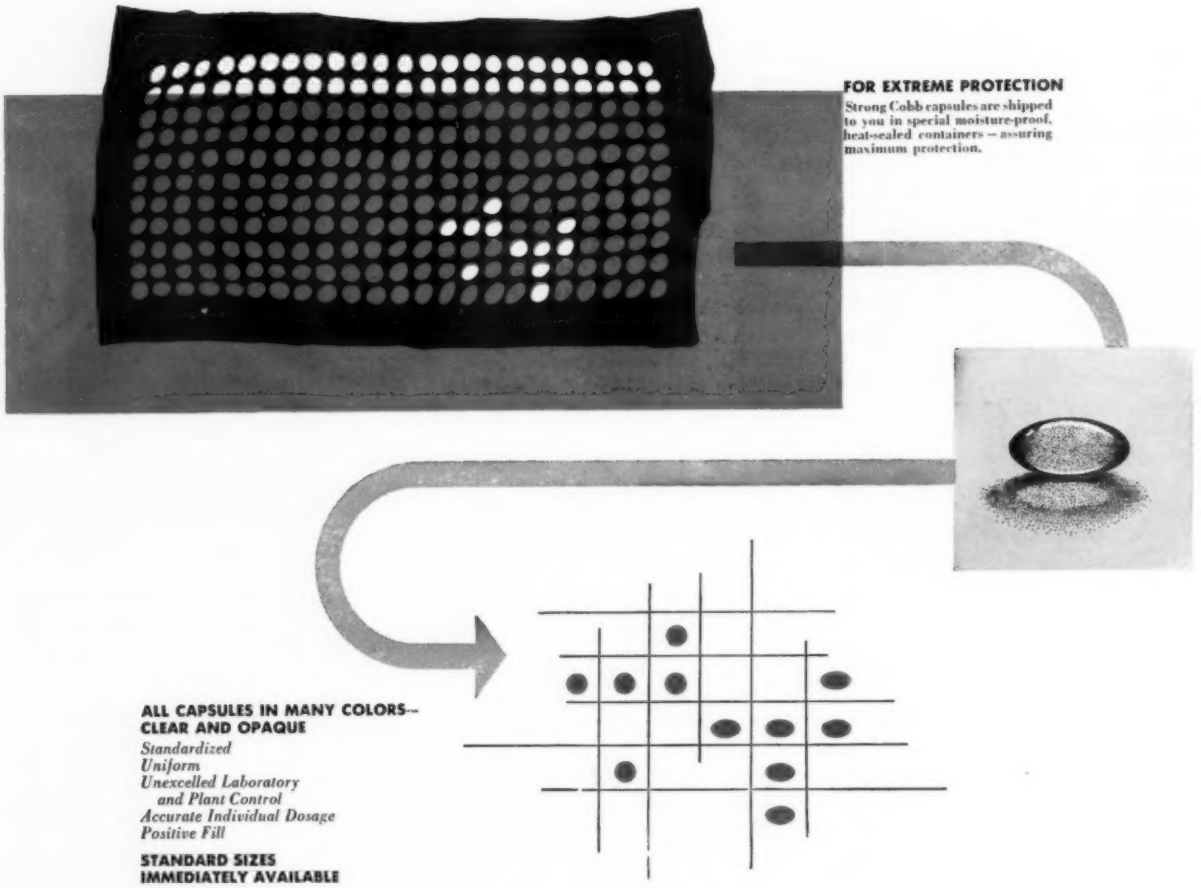

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Write for samples of our beautiful, pharmaceutically elegant capsules.

Francois Goby, fifth from left, president of Tombarel Freres and mayor of St. Vallier de Thiey, France, attending Rotary International convention in Detroit. He is shown with mayors of 11 other cities visiting Mayor Cobo (third from right, standing) at City Hall.

Johnson Promoted by Breon

Clyde A. Johnson has been promoted to division manager of the middle western states for the George A. Breon & Co., according to C. B. Drolsbaugh, vice-president and director of sales. Mr. Johnson has succeeded Leonard J. Clarke, who has been transferred to the middle eastern states as division manager.

Named Partner by Thurston & Braidich

Eusebio B. Vina has entered the firm of Thurston & Braidich, importers of gums and vanilla beans, as a general partner. Mr. Vina started the vanilla bean department of Thurston & Braidich twenty-six years ago and is considered one of the outstanding authorities in the vanilla bean industry.

EUSEBIO B. VINA

King Appointed by Atlas Powder

George J. King has been appointed director of sales of the Industrial Chemicals Department, Atlas Powder Company, according to J. R. Frorer, general manager of the department. Mr. King was transferred from the New York office, where he was branch manager. L. G. Parkinson, manager of the Chicago district office will succeed him in the New York district.

Snell Plans Construction

Foster D. Snell, Inc. will soon begin construction of the first unit of their laboratories in Bainbridge, New York, according to Dr. Foster Dee Snell. This unit will be occupied by the Supplee division, which will conduct vitamin work and supply animals to other laboratories.

John L. Smith

John L. Smith, chairman of the board of Charles Pfizer & Co., Inc. died at the age of 61 on July 10, following an illness of several months. He joined Pfizer as a laboratory assistant in 1906 when he was eighteen years old, and simultaneously continued studying in night school, receiving his Bachelor of Science degree in 1911 from the Cooper Union Institute. After a five-year absence, Mr. Smith returned to Pfizer as superindendent of the Pfizer plant and from that time on advanced steadily until elected president of the company in 1945 and chairman of the board in 1949, a position he held until his death. In 1942 he authorized the first commercial production of penicillin, which led the way to the other antibiotics and to the opening of the field of antibiotic research and development. In 1947 representatives of Pfizer won a patent for an improved process for purifying the penicillin.

JOHN L. SMITH

Mr. Smith was prominent in the industry, having been a member of the American Chemical Society, Manufacturing Chemists' Association, and the American Drug Manufacturers' Association. He is survived by his wife, Mrs. Mary Louise Becker Smith; a daughter, Mrs. Frank M. Campbell; a sister, Mrs. Frank Stanton; and a brother, Emil Smith.

William C. Bainbridge

William C. Bainbridge, H. Kohnstamm & Co., died July 6 following a long period of illness. He joined the company in 1906, following which time he did outstanding work on color chemistry and research, and was largely responsible for the development of certified colors. Mr. Bainbridge is survived by his wife, Grace, and daughter, Marian Lord.

Harry P. Bowra

Harry P. Bowra, for many years representative of Fritzsche Brothers of Canada, Ltd., and since October, 1948, manager of the parent company's Boston branch, died June 26 at the Peter Bent Brigham Hospital in Boston. He was 38 years old. He is survived by his wife, mother, two brothers and two sisters.

Dr. George W. Hoover

Dr. George W. Hoover, formerly chief of the drug division of the Food and Drug Administration, died July 27 at the age of 74. Dr. Hoover retired from the Administration in the late 20's to enter the private consulting business in the drug field.

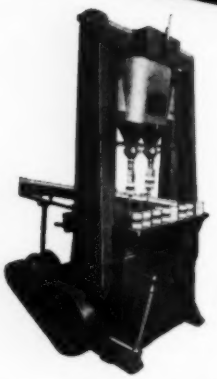
Frederick Parker Humphreys

Frederick Parker Humphreys, founder and owner of the Humphreys Drug Products Company of New Preston, Conn., is believed to have drowned, following the sighting of his yacht on July 5th which was adrift near Nantucket Sound. Mr. Humphreys was 59 years old.

C. Richard Woodfill

C. Richard Woodfill, manager of Commercial Solvents Corporation's Industrial Chemicals division, succumbed to a heart attack in Lenox Hill Hospital on July 24. He was 38 years old. He is survived by his widow, Ruth M. Woodfill, and his daughter, Barbara Lee.

. . . they chose US



Model MH "BOND"
Semi-Automatic
TWIN STATION
FILLING MACHINE

The makers of the products illustrated, old-timers in the powder-packing field, chose the Model MH Bond Semi-Automatic Twin Station Filling Machine several years ago. Today they are still enthused with its versatility in handling varying-sized containers and widely different materials, with its speed and accuracy in filling cans, jars, cartons and shallow boxes. It is the ideal machine to volume-fill, gross-weigh or pack talcum powder, face powder and other types of cosmetic powders, as well as dry pharmaceuticals, ground spices, cocoa, flour and other fine powdered materials. What's more, with the MH Bond a single operator can fill up to 40 containers per minute with the closest accuracy. If you package cosmetics, drugs, chemicals, *in fact powders of any kind in any type of container,* it will pay you to get in touch with **US.**

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Industrial Consultant

Hoarding

Hoarding is the process by which the other fellow buys material in abnormal amounts thereby creating a scarcity and a higher price to you because you didn't get into the market first The degree to which hoarding is being practiced by manufacturers and individuals alike indicates the general belief that the Korean campaign is anything but a local affair. Contrary to published reports hoarding this time is not limited to the items that were scare in World War II. In some areas commodities like cement which were in plentiful if not profuse supply during the last war already are unobtainable. Of course in this industry we do not hoard; we merely buy up more materials than we need to protect ourselves from those sonsabitches who do hoard. If the war spreads, as well it might, we in this country will know the meaning of stringency as the British have known it for many years, because our burgeoning economy has used up all our backlog of material. It is a great pity, though, that a little local war should scare the b'jesus out of us into panic buying.

War Preparations

Those of you who are contemplating necessary building had better start moving fast. Building materials in all parts of the country are tight, especially steel, lumber, plumbing and lighting fixtures, and even bricks and cement. Just as the machinery companies reached the point where backlogs from the last war were cleaned up they are being deluged with orders on which deliveries are bound to be long because steel is in acutely short supply. You should telegraph your representatives in Congress for an immediate rationing system. In one case recently I urged one of my clients to buy all the materials for a new building project even though the plans for the building are not complete in detail. All we know about it is the size and type of structure. I do not feel this is hoarding because the building is needed now and the company is producing vitally essential pharmaceuticals and already has received war contracts far in excess of existing capacity. If you are in the same boat you had better stop talking and start moving.

To give you an idea of what's happening I will recite my itinerary for the past week: Philadelphia, Dayton, Lexington, Ky., Benton Harbor, Mich., Chicago and San Francisco. Just as I was beginning to feel physically fit once again and had got rid of the hangover of fatigue and tension engendered by the terrific pressure of the last war, I am right in it again up to the ears, with everybody from hell to hackney demanding help, and driven by the consciousness that wherever I am I should be some place else.

Finance

Some time ago I was retained by a large financial organization to advise them on the merit of enterprises in which they should invest. This company is operating under an unusual policy: they do not wish control of any enterprise they finance. Indeed, they will not invest in any enterprise in which there is the remotest possibility that they might have to assume management control in order to protect their investment. Therefore, the requisites are: The enterprise must already be established and operating but its age and profit history are of no importance provided there is a demonstrable market for its products. Second, the existing management must be experienced, well trained and alert.

So if you need money I can get it on a risk investment basis. My clients are interested in common stock only and rarely will take more than 30 per cent of the common stock of any enterprise, and there is no upper limit. So if your enterprise needs money let me hear from you. Disclosure of information must be complete and will be held in complete confidence. This information must state the name of the company; its age; the average annual sales for the past three years and profits, if any; the names, ages, training and experience

In Duraglas bottles, your product says: "pick me!"

ADD STAND-OUT LOOKS TO YOUR DRUG, CHEMICAL OR TOILETRY

Give it "reach-for-me" appeal in one of the 1400 Duraglas bottles "functioneered" for professional appearance and easy use

YOUR FIELD MAY be crowded, but there's always one that stands out—the sales-winner. That "one" could well be *your* product.

To improve your chances, use stock-mold Duraglas bottles. With them, you add good looks at low cost. Duraglas containers lend themselves to unlimited label and closure treatment—the key to that *individual look.*

The basic designs of Duraglas containers meet both consumer likes and the practical needs of your filling line.

For everything you need, from bottles to closures and shipping cartons, always look to Owens-Illinois. From this one dependable source you are assured of uniform quality, prompt service and the continuing benefits of Packaging Research.

Duraglas TRADE MARK REG. U.S. PAT. OFF. Bottles are Protectors of Quality

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

of all top management personnel; and a statement of the extent of the market and the means by which the size of the market was determined. Cosmetic and soap companies will not be considered by my principals. Neither will inventors unless patents have been issued and at least one of their inventions is in commercial operation.

Stimulating Workers

We are only beginning to get an idea of what makes workers produce effectively. In the old days workers did enough to get by on because they were afraid of being fired for doing otherwise. Later on in some industries mechanization determined the amount of the worker's output. In the majority of industries, however, even though they are mechanized, the worker can control the output of the machine and hence his own output. In some industries machine and manual work are intermixed, and in still others manual work prevails.

Music has been found to be a very stimulating influence when it is properly handled. In many plants it is improperly handled because it is expected to drown out the roar of the machinery, thus adding many decibels to the sum total of nerve-wracking noise. In other plants especially where hand work prevails music often is too soft and is often soporific. In my observation music produces its greatest effect when it is not continuous and when it is adapted to the time of day. Toward the end of the morning and the middle of the afternoon workers need something to alert them. Everybody responds to a sudden loud noise and therefore after an interval of silence at the high fatigue points the sudden crashing of a Wagnerian overture would wake people up.

As I have mentioned before I think factory lighting is all wrong because even when it is good from a quantity standpoint it is too constant and anything that is monotonous has a sporific effect. Therefore good lighting would permit automatic changing at intervals of light values. Thus the introduction into fluorescent fixtures of red or green bulbs which could be independently controlled would make it possible to change light values at stated intervals. The same thing might be accomplished so that ordinary lighting could be increased or decreased periodically.

Temperature variation might be introduced to alert people at stated intervals. Many workrooms are too hot and therefore cause sleepiness which in turn is often the cause of accidents. A sudden drop in temperature of 5 or 10 degrees maintained for a few minutes would have the effect of alerting people. In plants that are air conditioned this could be achieved very easily.

Noise control is very important in providing good working conditions, but the stimulating effect of a sudden loud noise cannot be overlooked because it alerts people.

Much has been written on the stimulating effect of color. I've had a lot of experience in the use of it and I remember one recent instance where an operator told me that she had ceased to suffer from headaches (due, obviously, to eyestrain) when the walls of the packaging department were changed from white enamel to soft green. White paint, and particularly enamel, should never be used on side walls or machinery.

We shall never be able to regulate workers' private lives (thank God!) so that they will come to work properly rested, free from worry and well-nourished. Therefore management's job is to prove the conditions under which we can get workers to produce at maximum effectiveness without intruding upon their dignity, without impairing their health or driving them to the point of mental and physical exhaustion.

What the Worker Wants

I have read a considerable number of surveys on what the worker wants and although there is fairly common agreement on the basic factors, I think none of them should be accepted without critical analysis. All workers do not want the same things. Their desires are likely to be influenced by their financial status, their age, their training, their experience and their marital status. Although most surveys list job security as the first requirement, it has been my observation that this applies to the older workers, the married workers, the lazy workers, and that large group of individuals who are exceptionally conservative, afraid to take responsibility, and afraid to take chances. In any event, considering the historical stability of the drug and cosmetic industry I think the time has come when we should go over to annual wage for all our workers.

The second factor is the rate of pay and the opportunity for pay increases. Among young workers I think this is the primary consideration. During the war those of you who had plants located near the shipyards and aircraft plants found that you had to increase your pay scales to maintain your working force. A substantial part if not the majority of workers will seize the opportunity to get jobs with high pay scales and lots of overtime even when they know the jobs are temporary and there is a certainty of being out of work after the temporary period has expired.

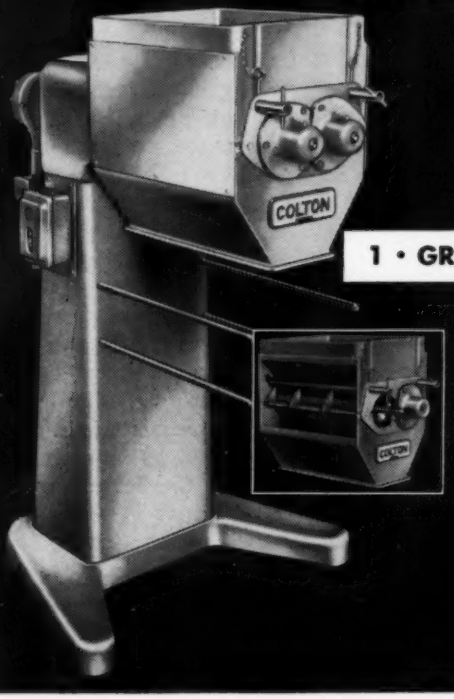
Working time is a factor I would list as third. This relates especially to the number of days weekly. Workers have become accustomed to the five-day week and plants which by the nature of their operations must work six or seven invariably have a high turnover, unless of course they are willing to pay premium rates for overtime. Workers are conscious of the vacation periods and are very much interested in whether they get one or two weeks annually, and whether or not they are paid for holidays, and the number of holidays that are recognized.

The type of work is an important factor and the worker's judgment of it will depend upon education and experience. Light, interesting work will appeal to more workers than heavy, dirty work.

Employee benefits such as pensions, sick pay, cafe-

Colton's *NEW* Tableting Equipment

Four new units for the efficient and economical production of tablets.

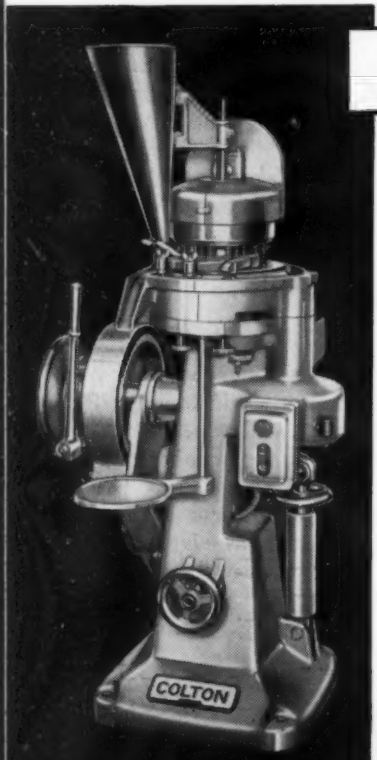


1 • GRANULATOR

2 • DRYING OVEN

1 • New Colton No. 44 Twin Rotor Granulator has double the screen area plus continuous rotary operation, thereby giving 2½ times the capacity of ordinary, oscillating granulators. Delivers to trays, drums, bags. Dustproof. Accessible. Quick-change screens and rotors. Standard or stainless steel.

2 • Model 1030 takes 10 trays; 2030 takes 20 trays, 30" x 30" x 1". Double steel shell, fully insulated with rock wool. Positive, uniform circulation of air from high-speed fan. Dampered inlet and outlet. All controls outside. Safety latches. Electric, gas or steam heat.



3 • ROTARY TABLET PRESS

New Colton No. 216 Rotary Tablet Press makes up to 800 tablets a minute; maximum diameter ⅝"; maximum depth of fill 1¼"; maximum pressure 6000 lbs.; 16 punches and dies, easily changed. Variable speed drive; standard 1 HP motor. Fast, accurate, dustproof.

4 • COATING *and* POLISHING STAND

For pans up to 30", new Colton No. 6; over 30", new Colton No. 6A Coating Stand. Driven direct from motor through gear reducer; no belts; no slippage under load. Shafts mounted on anti-friction bearings; gears completely enclosed, running in oil. Motors ¾ HP and 1 HP polyphase.

Write for literature on these and other Colton pharmaceutical machines and name of nearest Colton field office.

ARTHUR COLTON COMPANY

Div. SNYDER TOOL & ENGINEERING CO.
3405 E. Lafayette Detroit 7, Michigan
Offices in Principal Cities

SPECIALISTS IN PHARMACEUTICAL AND PACKAGING MACHINERY FOR OVER 65 YEARS

teria and recreation facilities are very important considerations for the majority of workers.

Opportunity for promotion is an important factor, especially among young, ambitious male workers. However, it has comparatively little weight with new workers because workers recognize that "opportunity for advancement" is a stock phrase with all employers which in the majority of cases doesn't mean a damn thing. It is applied with equal thoughtlessness to file clerks and porters alike. Workers should be told there is no opportunity for advancement until they demonstrate capacity for it. When the worker is employed for a short period of time he will size up his chances for himself. A great many workers do not expect advancement and, indeed, don't want it.

Working conditions, cleanliness, safety, absence of excessive noise, and attractive surroundings inside and outside factory buildings are very important factors. Even an illiterate day laborer will take a job in a clean, attractive plant more readily than he will in a plant that is a pigsty. Employers should remember that an unattractive plant looks like a hard place to work even though it may not be.

Fellow workers are important. People like to work for organizations that have a reputation for hiring nice people. In some parts of the country color, racial and religious lines are drawn, and workers will take these factors into account before applying for a job if they know the existing situation, and if they don't they will take them into account soon afterward.

Company prestige: Workers like to be employed by companies which have a reputation for treating their workers fairly and for providing good working conditions. There are some companies in the trade which never had any difficulty getting workers even during the war period, and which always had a waiting list during peace times. Every company in our industry could and should have that sort of reputation.

The type of supervision provided by management is vitally important, not only in maintaining efficiency but in maintaining morale. In small communities workers will not apply for jobs in or continue to work for companies in which the supervisors have a reputation for being Simon Legrees.

Plant location is a vital factor because workers must take into account the cost of transportation to and from work and the time spent in traveling as well. This is particularly true of plants which employ women workers, particularly married women. It has been demonstrated repeatedly that married women who have homes and children to look after will work in neighborhood plants from which they can walk home in a few minutes, much more readily than they will in remotely located plants even though in the latter plants wage scales and all other conditions are better.

Respect by employers creates a feeling of importance and individual dignity which plays a vital part in the thinking of all workers. Employers can hardly expect respect and affection from their employees unless they also respect and like their employees. In plants where the individual dignity of the worker is respected and he is made to feel an important part of the organization to which he belongs there will be few labor difficulties.

A Real American

The men's room of the Blackstone Hotel is operated by a gentleman known as Borislav Lukasiak, who through forty years of service is known and respected by many Chicagoans, because he typifies the opportunity America offers to all honest men who are willing to work at any occupation however humble it may be. Borislav came over here from Poland forty odd years ago and in all that time has had but two jobs. Out of his meager salary and his tips, he managed to save enough to educate two children and to purchase two houses and an apartment building. I asked him what America meant to him and he said, "Home and opportunity." I wish the college kids now pouring out of school, looking for white collar executive jobs with high salaries and liberal pension plans could have an opportunity to talk with men like Borislav. Maybe they'd realize that America still will reward work and thrift and that the America Borislav knows can be destroyed if most of the younger generation comes to believe that America means little work and large handouts.

Material Handling

Isn't it remarkable how pallet trucks have improved in the last few years. Time was when no one in his right mind would palletize a multistorey building. The floors weren't usually heavy enough to carry available fork trucks; elevators were too small. Now light hand guided pallet trucks and fork trucks are obtainable as well as a tremendous variety of specialized models. The most important advance has been in adapting the power operated fork truck to turn in narrow aisles.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Combination Ampul Filling and Sealing Machine

Popper & Sons, Inc., 300 Fourth Ave., New York 10, manufacturers of washing, filling and sealing equipment for the pharmaceutical industry announce a modification of the PerfeKtum Model TC-2. This model, in addition to being used for filling and sealing ampuls, may now also be used for the automatic filling of vials and small bottles.

This machine has a production of 2500 ampuls per hour with one attendant and provides a uniform fill and positive seal. The PerfeKtum Model TC-2 will process ampuls ranging from 1cc to 10cc with a change-over time of less than 10 minutes.

Complete details may be obtained by addressing the manufacturer.

Burroughs Wellcome & Co.

compresses Rx preparations

At Burroughs Wellcome & Co., Tuckahoe, New York, Stokes single punch and rotary tabletting machines produce a great number of ethical preparations in compressed form. All Burroughs Wellcome compressed products are formula-accurate . . . uniform in size, weight, density and finish.

Ethical pharmaceutical houses throughout the world use Stokes tabletting machines . . . together with Stokes mixers, granulators, drying ovens, coating and polishing pans . . . for profitable production of their various tabletted products . . . in all sizes . . . round or special shapes . . . plain, engraved or embossed surfaces.

Stokes tabletting machines . . . in many different capacities . . . are high-speed, high production units designed for profitable tabletting production.

Better tablets at lower cost can be yours through the Stokes Advisory Service . . . assistance in tablet formulae, punch and die design, improved manufacturing and operating procedures. There is no obligation for this service.

Reduce tablet costs by using Stokes carbide punches and carbide insert dies . . . check coupon for detailed information.

STOKES MAKES Tabletting Machines, Pharmaceutical Equipment, Tube Fillers, Vacuum and Special Processing Equipment, Vacuum Pumps and Gages, Plastics Molding Presses, Water Stills and Special Machinery.

F.J.S. F. J. STOKES MACHINE COMPANY

5932 TABOR ROAD

PHILADELPHIA 20, PA.

F. J. Stokes Machine Co.
5932 Tabor Road
Philadelphia 20, Pa.

☐ *We need assistance in tabletting...have your representative call.*

☐ *Send us the Stokes story on carbide-tip punches and carbide-insert dies.*

Name _____ Title _____

Company _____

Address _____

City _____ Zone ____ State _____ AV

Filling Machine

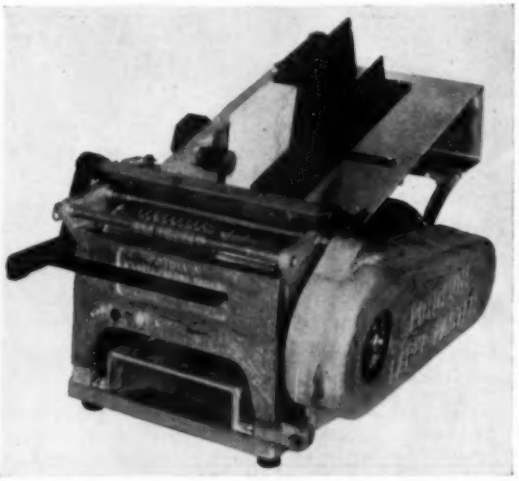
A special 30 spout, fully automatic rotary liquid filling machine with overhead drive has just been completed by the MRM Company, Inc., of Brooklyn, N. Y. It was specifically designed for filling highly corrosive materials such as sodium hypochlorite bleach solutions and features stainless steel construction for all parts in contact with the solution. Non-metallic parts in contact with the solution are Lucite, Tygon and Koroseal. The 50 gallon capacity tank is Koroseal lined and removable for thorough cleaning.

Of particular importance, is the exclusive designs of nozzles and spouts. The nozzles are made of stainless steel type 316 and the spouts are Lucite. A slipfit collar on the nozzle securely holds the spout in place insuring an absolute air tight and leakproof fit. Nozzles can be quickly removed for cleaning by loosening the collar bolt.

The filling machine can fill fractional ounces up to gallons. All sizes with the exception of gallons are filled with every nozzle. Gallon sizes are filled on alternate nozzles.

Label Gluer

A light touch on a rod delivers a glued label to an operator of the new Potdevin Semi-automatic Feed Label Paster. Ungummed labels are stacked in an adjustable hopper, accommodating labels up to 5½ inches wide. The operator's hands are positioned to receive the label; touching the feed actuator with the back of



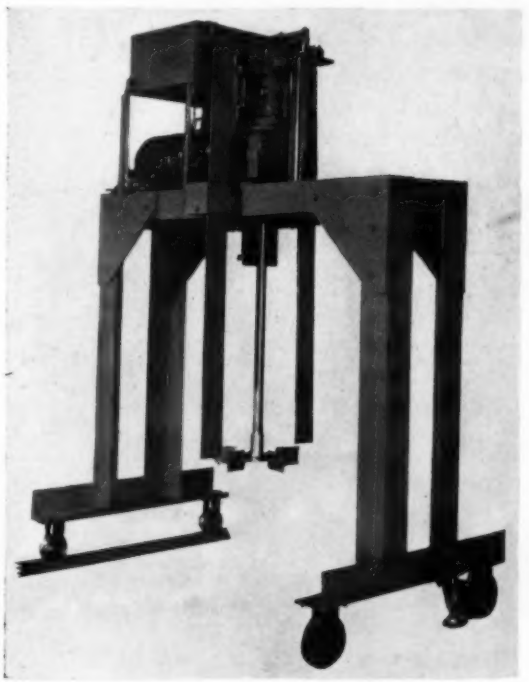
either hand causes one label to be fed through the machine automatically. The label picks up a coating of adhesive and is delivered to the operator's fingertips. The amount of adhesive applied to the label is controlled by a dial regulator. Manufactured by: Potdevin Machine Company, 1285 38th Street, Brooklyn 18, New York.

Heavy-Duty Agitator

A new heavy-duty liquid agitator developed by Mixing Equipment Co., Inc., Rochester, N. Y., can be moved quickly from one tank to another for batch mixing and blending. A single unit will serve up to 40 tanks, in any order desired.

The unit was originally developed for paint tinting, an application that requires a heavy-duty, easily movable unit, capable of being quickly removed from one tank and inserted in the next. Operating tests indicate that the new agitator will handle the tinting process in one-eighth to one-sixth the time formerly required. Comparable results are predicted for similar processes using a number of tanks.

The new Lightning Agitator is a turbine-type unit containing all components necessary for complete and efficient batch mixing processes. When connected to plant electrical supply, it is ready to operate. Mounted on casters, it rolls on a track from tank to tank as required. Correct mixing speed for each individual batch



can be selected quickly with a simple variable speed control.

The impeller shaft and turbine-type impeller are raised and lowered in the tank hydraulically. To switch from one tank to another, the operator merely sets two levers, releases a floor lock and wheels the unit to its new position.

No tank baffles need be installed, because the new Lightning Agitator is fitted with two integral baffles that raise and lower with the impeller. These baffles are designed to promote rapid and thorough mixing. They eliminate the expense of attaching baffles to a number of tanks, with consequent cleaning problems.

The unit is supplied in capacities up to 4.5 H.P. at the impeller. The manufacturer recommends and supplies the correct electric motor and impeller size for the individual application. Shaft, impeller and baffles can be furnished in a wide variety of metals to suit individual process requirements.

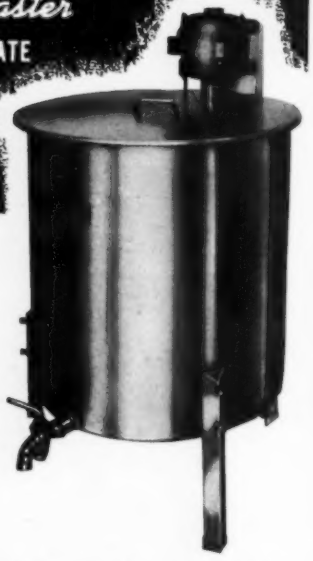
For complete information, address Mixing Equipment Co., Inc., 1024 Garson Ave., Rochester 9, N. Y.

Save Time and Labor

with this Complete Mixing Unit

It's Easier-Faster

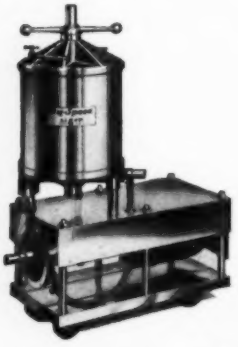
TO LOAD AND OPERATE



For High-Quality

Low-Cost Processing

Alsop Mixing Tanks make your mixing and blending operations extra easy, fast, efficient. The all-welded stainless steel construction, rounded corners, and the highly polished, crevice-free surfaces mean less time and labor in cleaning. The shorter legs makes the whole Tank lower, easier-to-load and operate. For easier, faster mixing—for efficient, economical operation, specify Alsop Mixing and Storage Tanks—sizes from 5 to 300 gallons capacity.



Low-Cost Filtration

This Alsop "Sealed-Disc" Filter assures uniform, positive filtration at lowest cost. Its simplicity, portability and compactness means convenience and speed in operation. Made in Stainless Steel, Brass and Bronze, etc., in a wide range of sizes and capacities.

Our new catalogue completely describes our Mixing and Storage Tanks, Filters, and Portable Mixers. Write to Alsop Engineering Corporation, 508 Cass Street, Milldale, Conn.

ALSOP ENGINEERING CORP.

Filters, Filter Discs, Mixers, Agitators, Pumps and Tanks

SAVED

the MIKRO hand of ECONOMY

93% IN POWER

84% IN TIME

with the

MIKRO PULVERIZER

Two-pass Wet Milling MIKRO PULVERIZER installation grinding clay-graphite and colored sludges for a pencil manufacturer.

Leading manufacturers of pencils and crayons have applied the Wet Milling MIKRO-PULVERIZER to grinding their clay-graphite and color sludges. It had been previous practice to ball mill this sludge.

In one plant the former procedure had been to run a batch of about 150 gallons in ball mills requiring a total of 25 h.p. for a period of more than 50 hours. The same finished product is produced in a Wet Milling MIKRO-PULVERIZER in 8 hours using 10 h.p.—1250 h.p. hours compared to 80 h.p. hours.

The Wet Milling MIKRO-PULVERIZER has found a considerable use in the food products field, color and dyestuff industry, as well as for pharmaceutical ointments and the chemical, clay, cosmetic and insecticide industries. It is equally successful on both pastes and slurries. For grinding solids in suspension, or subjecting the material to an intensive mixing action—the MIKRO generally will do either, and do it better with less power.

Also available for Dry Milling, our full line of MIKRO-PULVERIZERS and MIKRO-ATOMIZERS noted for thorough blending and precise particle control... grinds from granular to ultra-fine in lower micron range... capacities from 75 to 25,000 lbs. per hour. For complete recovery of solids and elimination of industrial dusts, investigate our MIKRO-COLLECTOR.

See the MIKROS on display
Booths 52 and 53
National Chemical Exposition
Coliseum, Chicago Sept. 5-9

SEND FOR—New Illustrated MIKRO Catalog

PULVERIZING MACHINERY COMPANY

228 Chatham Road Summit, New Jersey

MIKRO-PULVERIZER (FINE) **-ATOMIZER** (ULTRA FINE)

Reg. U. S. Pat. Off.

Also Makers of the MIKRO-COLLECTOR

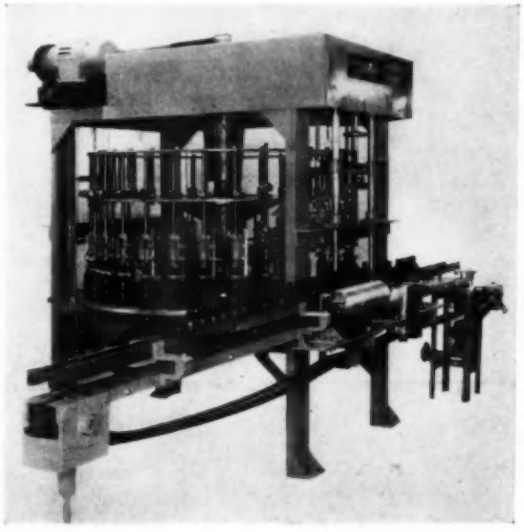
PRESERVE OUR HERITAGE: FAITH, FREEDOM AND INCENTIVE

Sanitary Filler

The MRM Company, Inc. has recently developed a new principle for fully automatic rotary liquid fillers. Known as the R-50 series, they feature a removable stainless steel tank, overhead drive mechanism and if required sanitary fittings and spouts with no exposed threads. The R-50 meets with the approval of inspectors of Boards of Health throughout the country, including New York City, known for its stringent restrictions.

One of the first installations of the R-50 was made in the Pharmaceuticals, Inc. plant in Newark, N. J. This company packages "Sedagel," an upset stomach remedy. The "Sedagel" people required a machine to meet the highest standards of sanitation.

The photographs show an R-50, 12 spout Automatic Rotary Filling Machine in operation in the Pharmaceuticals, Inc. plant. "Sedagel" is a white, thickish semi-liquid preparation. Fifty-two four ounce glass bottles are filled per minute at the present time. Greater speeds ase possible by means of the variable speed drive integrated with the filling machine. The filling machine is fed by a 450 gallon, stainless steel storage tank on the



floor above. The overhead drive mechanism, mounted on top of the filter instead of on the bottom as in most fillers, permits thorough cleaning under the body of the machine. Removal of the tank is a desirable feature because it can be cleaned and sterilized very easily. Contamination is eliminated by the use of unexposed threads in all fittings and spouts.

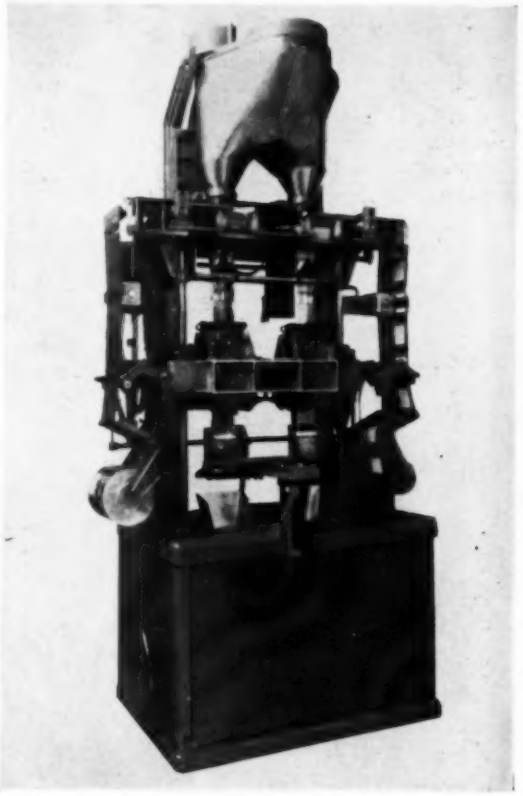
Fin Sealing

Herein is a brief explanation of a fin sealing machine, the Model B Auger and Model B Volumetric, that uses laminated and plain heat-sealing foil, heat sealing coated papers, but not cellophane or kindred types.

The outstanding difference in this equipment over the older (transwrap) model is that you can now register the print on both sides of the package. Heretofore, the back of the package was never centered; therefore, non-uniform or random type of printing was necessary, which, in many cases, divided the words explaining the message. The package that is now discharged has uniform printing both front and back.

The present method is that the roll of foil is unwound from rollers mounted on the side of the unit, and only one roll is necessary for each side of the machine.

To further acquaint you with the operation, the foil is drawn from the roll, progresses to the top of the unit,



then is slitted in half. One half forms the back of the package while the remaining one half forms the front of the package. They are then both brought over guides to the forming tubes.

An important factor of this equipment is the cost picture of the heat-sealing material. In assuming that foil is going to be used, it is only necessary to have registered copy printed on one side of the material. The continuous printing that was formerly printed on the back of the foil is eliminated. Also eliminated is the cost of etching for the continuous printing which usually amounts to approximately $125.00.

There is an additional saving in purchasing only one roll for each side, as against formerly purchasing two rolls for each line of fabrication.

One prominent convertor states that there is a definite saving of approximately 20c per pound.

The production capacity is forty packages plus per minute, depending upon the commodity that is to be discharged and the size of the package required.

The unit may be able to use other types of heat-sealing material. Made by The Transwrap Machine Corp., Hasbrouck Heights, N. J.

Flavor is the thing that makes your product stand out from others. And Exchange Oil of Orange *has* the flavor...that distinctive and preferred taste unique to oranges grown in the sunny, sheltered valleys of California.

Try Exchange Oil of Orange for yourself. Give it all your tests for *quality, uniformity* and *strength.* You'll like it...and you'll buy it!

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PATENT THOUGHTS AND TRENDS

*by Thomas Cifelli, Jr., Patent Attorney**

Germicidal Soap Patent Appeal Won by Drs. Kunz and Gump

The experts said you could not make a soap germicidal by adding a small amount of phenolic materials to it. This was not a mere idle statement, based on someone's preconceived notion, but in fact was the result of numerous unsuccessful efforts to make soap germicidal by adding small amounts of phenols thereto.

It was realized that soap and phenolic materials could be combined to make soap-containing disinfectants. However such compositions are not ordinarily used for detergent purposes and the soap was employed primarily to solubilize the phenols and was present normally in no greater amount than the phenolic material. It was also known that soaps allegedly possessing both detergent and germicidal properties had been suggested but such soaps depended upon the presence of mercury-containing compounds, which compounds have certain disadvantages in that they are cumulative poisons and skin irritants.

It was at this point that Drs. Eric C. Kunz and William S. Gump entered the picture. They proved that the experts were wrong and that soaps could be rendered germicidal by incorporating therein small amounts of certain phenolic materials. These inventors, both of whom have obtained numerous patents, are connected with the Givaudan organization, Dr. Kunz being the president and Dr. Gump being senior research associate.

Kunz and Gump Patent Application

The two inventors filed their patent application in 1940 and replaced this with another application in 1944. In view of the fact that this latter application is not generally available at this time and because it contains a rather complete disclosure, it is being set out in full below.

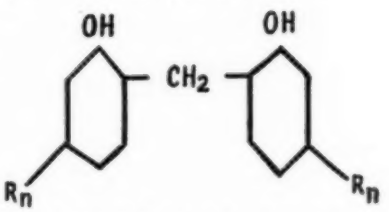
'This invention relates to germicidal soaps, and more particularly to soaps, whether in solid or liquid form, that combine the detergent properties of ordinary soaps and germicidal properties of certain phenolic materials.

This application is a continuation-in-part of our co-pending application, serial number 324,054, filed March 15, 1940.

"According to this invention, soaps such as washing, toilet, or liquid soaps may be rendered germicidal by incorporating therein a small amount of a 2,2'-dihydroxy halogenated diphenyl methane.

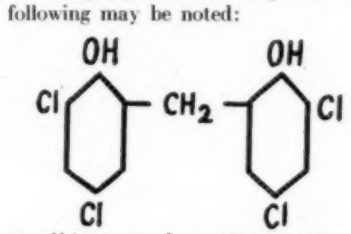
Active Agents

"The 2,2'-dihydroxy halogenated diphenyl methanes used in this invention may be represented according to their chemical structure as follows:

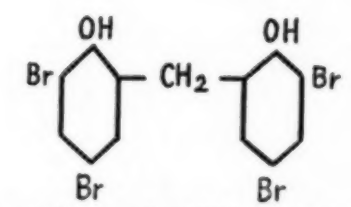


where R is halogen and n is an integer from 1 to 4 inclusive.

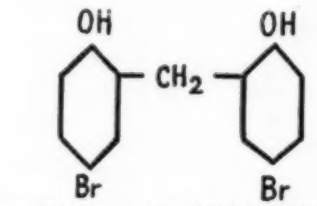
"As examples of specific members of the foregoing class of compounds the following may be noted:



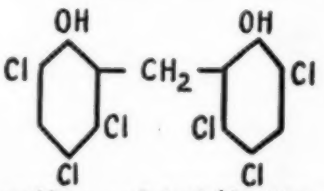
melting point 166°–167°C.,



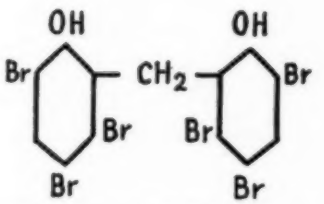
melting point 198°–199°C.,



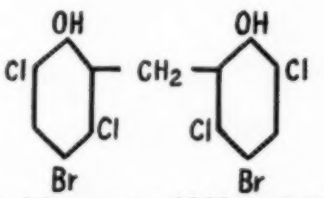
melting point 182°–183°C.,



melting point 164°–165°C.,



melting point 180°C., and



melting point 166°–166.5°C.,

Their mono-sodium (or potassium or lithium) salts.

"All of the 2,2'-dihydroxy halogenated diphenyl methanes thus far prepared are white, crystalline solids. The alkali metal salts are white, substantially odorless substances that do not possess clearly-defined melting points, but decompose at varying temperatures upon heating.

Amounts of Agents Employed

"Relatively small amounts of the germicidal agents of the invention are

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sufficient to render soap germicidal. Amounts as low as ½ of 1% of the germicidal agent, based on the weight of the soap content of the final soap product, have proved satisfactory in some cases. However, we prefer to use amounts of the order of 1 to 3% on the same basis. The upper limit of the amount of agent which may be used is determined by practical considerations. As a general rule, increasing the concentration of agent in the soap increases the germicidal activity of the resulting soap. However, the cost of the agent relative to the cost of the soap itself mitigates against the use of too large an amount of the agent in soap. Moreover, large amounts of the agent in soap are to be avoided since it is desired to obtain a resulting soap product with satisfactory detergent properties.

"The invention may be practiced by adding the agents to the soap in any suitable manner during the crutching or milling or similar operation. Care should be taken to obtain a uniform distribution of the agents throughout the soap. They may be dissolved in a small amount of a suitable solvent for example, acetone or alcohol. If desired, however, the agents may be added directly to the soap without dissolving them previously. In the case of 'frame' soaps, we prefer to add the agents to the soap during the crutching operation. With milled soaps, we prefer to make the addition during the million operation. In the case of liquid soaps, we prefer to effect the addition, while the agent is in solution. In general, any method which results in the agent being uniformly incorporated into the final soap product is satisfactory.

Prior Art

"We are aware that it is already known to combine soap and phenolic materials to make soap-containing disinfectants. Such compositions are not contemplated by this invention and indeed are materially distinguishable from germicidal soaps. Soap-containing disinfectants are not ordinarily used for detergent purposes. Their soap content is primarily used to solubilize the phenols and is present normally in no greater amount than the phenolic material. On the other hand, the germicidal soaps of this invention are both detergents and germicides. They combine the properties of both types of materials, and thus can be used as toilet, washing or liquid soaps, unlike the soap-containing disinfectants. Moreover, the instant germicidal soaps contain a small amount of phenolic material in comparison to the soap content.

"We are also aware that soaps allegedly possessing both detergent and germicidal properties have been suggested. However, so far as we have been able to ascertain, such soaps which do appear to combine these two properties depend upon the presence of mercury-containing compounds. Such compounds have certain disadvantages not possessed by the phenolic materials of this invention. In this connection we may mention the widely-held view that mercury compounds are toxic and that they are cumulative poisons. Indeed, we have noted that all commercial soaps containing mercury that we have seen are labelled 'POISON.' In addition, soaps containing mercury compounds are irritating to the skin of the user. We believe our invention to have been most unexpected. This conclusion is reached by a consideration of the prior art relating to the use of phenolic materials in soaps. As to the latter, we believe a fair picture can be obtained from some excerpts taken from Hampil, *Journal of Bacteriology*, Vol. XVI, pp. 287-300, (1928). In the Introduction of this article, the author states:

" 'It has been abundantly shown that soaps in general have a limited germicidal value, . . . and various workers have expressed the idea that this is due for the most part to their detergent properties. The literature indicates that a large variety of organisms have been tested, at time intervals of exposure from two and one-half to sixty minutes. Soaps prepared from various types of oils have shown more or less selective action. The typhoid, diphtheria and colon bacilli, the spirochetes, the gonococcus, the meningococcus and different types of the streptococci are easily destroyed. On the other hand, it is significant that Staphylococcus aureus is particularly resistant. It is no doubt because of this selective action that efforts have been made from time to time to incorporate certain germicidal substances into soaps, and thereby manufacture a product which will not only cleanse but at the same time destroy organisms found on the skin, regardless of the type present. There are numerous commercial soaps on the market at the present time, to many of which have been added phenolic derivatives. The soaps are labelled as antiseptic, and a phenol coefficient is often determined. As yet there are no scientific data to show that the incorporation of the phenolic substances has added to the intrinsic germicidal activity which the soap itself may possess. The determination of the phenol coefficient for such a so-called 'antiseptic soap' is in practice the measure of its activity against Bacillus typhosus, which organism has been shown by several workers to be very susceptible to the disinfectant action of soaps.'

"After an investigation 'undertaken to determine the effect of pure individual soaps on the germicidal activity of certain representative phenolic substances,' the author reached these conclusions, inter alia:

" 'From a practical standpoint, this work indicates the unsuitability of phenolic compounds as germicidal agents in soaps. A germicidal soap is expected to perform a double function. It must cleanse the surface, whether this surface be the skin, floors, or walls, etc. . . .'

" 'The marked inhibitory action of sodium oleate, sodium myristate, potassium palmitate and potassium stearate on the bactericidal properties of phenol, metacresol, secondary butyl phenyl, n-butyl resorcinol and n-hexyl resorcinol has been demonstrated. The relationship appears to be more or less quantitative and indicates the impossibility of producing a germicidal soap by adding small quantities of a phenolic compound to soap. The addition of large quantities of a phenolic disinfectant is not feasible, since the cost of production precludes the use of any but very crude and irritating phenols. Phenols are therefore unsuitable as disinfectant agents in the production of germicidal soaps.'

"It is noted that the Hampil article was published in 1928 and thus would seem to be too old to represent the present state of the art. However, a diligent search of the scientific and patent literature to bring the matter up to date indicates that this is not so and that the Hampil article as above stated is a fair statement of the position of the present prior art.

"The method employed to test the germicidal properties of the soaps of this invention is that of the U. S. Food and Drug Administration. (Circular 198, December, 1931). The liquid soap employed had a 40% soap content and was prepared from a mixture of 75% cocoanut oil and 25% castor oil. The solid soap used was a neutral white toilet soap of the 'Lux' type. The fatty acids in this soap were of the following composition: (*Continued on page 272*)

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Tegin P . . . Propylene Glycol Monostearate — Self Emulsifying. For greaseless creams, lotions, ointments, brushless shave creams, cosmetic stockings, suntan creams, lotions.

Tegin 515 . Glyceryl Monostearate — Non-Self Emulsifying. Used in conjunction with other auxiliary emulsifiers.

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YOUR TRADE-MARK RECORD

by John H. Graham
International Patent and Trade-Mark Consultant

Trade-Marks and Unfair Competitions

Very often the question is asked "why should I bother with the expense of registering my trade-mark?" "Why can't I rely on my common law rights?"

It is true that anyone has basic rights under the common law in this country to protect him. For example, it is well established that anyone who feels he has been harmed by another person's acts in commercial trade can sue under the laws of unfair competition.

The law of unfair competition is equally recognized as broader than the law of trade-marks.

What, then, are the benefits of seeking registration of a trade-mark? Why not rely upon the law of unfair competition? The answer is quite simple. Registration, particularly under the present laws, namely, the Lanham Act, gives concrete proof of ownership. It serves to show the mark as used and how you use it.

It is considered evidence of the existence of the mark and your ownership of the mark. Remember also that when you receive the certificate of registration, it means the mark has passed Official approval. It has been compared to all other similar registered marks and found free of conflict. It has been declared free of the taint of descriptiveness. Basically, one "tribunal" has passed on its merits, namely, the Patent Office. So, you have something concrete to use in legal conflict.

With a trade-mark registration you can utilize all the grounds under unfair competition available. Yet you have the advantage of proof of the existence of the mark and your ownership.

For example, Evelyn Westall Co., was successful some time ago in preventing a restaurant from using "White Shoulders" as the name of a room, where, at the opening of the restaurant the guests were sprayed with Westall's "White Shoulders" perfume and bottles of the perfume were on display. It was held that under the law of unfair competition the impression would be created that there existed a connection between Westall and the restaurant and this could injure Westall's business. The existence of a trade-mark registration for "White Shoulders" for perfume in this case was not imperative, but it was a great help to be able to refer to this and merely show the continued and constant use as proof that Westall had legal rights to the mark. Without registration, under the unfair competition law, a long and involved procedure would have been required to show what rights of trade Westall had which were being infringed upon by the Acts committed by the restaurant.

Unfair competition, then, can be relied upon by anyone who feels that he is being unfairly used or monopolized in trade or commerce, but the existence of a registered mark is of great advantage.

The major test of unfair competition is very parallel to the tests in trade-mark conflicts. It is mainly a test of whether the public is likely to be deceived in any way. The public must always be protected from fraud, passing off of one person's goods for another's and general mispresentation.

A direct or market competition is not an essential ingredient of unfair competition. The Stork Club in New York City were able to successfully stop use by a bar and restaurant of their name in California, generally on the basis that although there was no direct competition, the fame of the Stork Club of New York City was known everywhere and thus anyone seeing that name attached to a restaurant, bar or night club, would assume an association which would be detrimental to the Stork Club owners. It is not necessary in such cases to show an actual injury or loss of trade. The possibility of such injury or loss is sufficient.

In reality, as will be seen from the above remarks, the law of trade-marks is a part of the broader and more general law of unfair competition. The purpose of both is to prevent one person from deceiving the public by passing his goods off as another person's goods.

As further examples of such cases, "Miss Seventeen" for girdles was held to unfairly compete with the fashion magazine "Seventeen" devoted to the interest of girls, since the use of the same name was likely to create a belief that the girdles were sponsored by the magazine.

Also, Safeway Construction Co., who were engaged in building and selling homes to individuals, was held to unfairly compete with Safeway Stores, a food chain which also constructs buildings for its own use.

The Metropolitan Opera Co., in New York, were successful in preventing the Chicago Opera Co. from using the word "Metropolitan" because the word has acquired national and international significance as denoting the New York Opera Company.

All in all therefore, unfair competition suits can be brought to augment your trade-mark protection. If you have a trade-mark registered it is a valuable asset in such cases. It shows your position and your interest immediately. Equally, it shows your diligence in protecting your valuable property.

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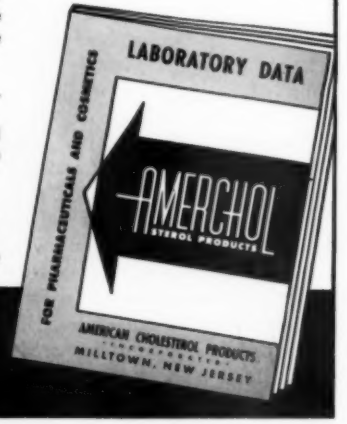

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Mere reliance on common law rights which include unfair competition is not safe. Particularly today, when so many different forms of trade-marks are possible, it is a vast mistake to simply rely on common law. A good sound trade-mark registration is obviously a form of insurance which can pay off well when called upon.

The following Trade-Marks were recently published in the Official Gazette of the United States Patent Office.

Absorbal—44—R—516,762
Densco, Inc., Denver, Colo.
Ser. Jan. 16, 1948 D. U. Dec. 4, 1946

American Beauty—22—R—542,764
Illinois Watch case Co., Elgin, Ill.
Ser. Nov. 29, 1947 D. U. Oct. 31, 1947

Astarte—52—AH—571,496
Allied Dists., Pittsburgh, Pa.
Ser. Jan. 3, 1949 D. U. Sept. 24, 1945

Beer-Bob—51—H—575,962
Beer-Bob, Inc., N. Y., N. Y.
Ser. Mar. 24, 1949 D. U. July 20, 1948

Bois de Boulogne—22—R—560,904
Les Parfums de Dana, Inc., N. Y., N. Y.
Ser. July 8, 1948 D. U. May 24, 1948

Blue Hyacinth—52—B—576,697
Haviland Labs., Inc., DBA Ann Haviland, N. Y., N. Y.
Ser. Apr. 6, 1949 D. U. Feb. 15, 1948

Claude Fontaine—51—BC—577,195
Les Parfums de Dana, Inc., N. Y., N. Y.
Ser. Apr. 15, 1949 D. U. Mar. 24, 1949

Dainti-Spray—44—R—518,205
Dainty-Spray, Inc., Brooklyn, N. Y.
Ser. Feb. 27, 1947 D. U. Feb 19, 1947

Figaro—23—R—570,101
S. R. Droescher Inc., N. Y., N. Y.
Ser. Dec. 7, 1948 D. U. Since 1923

Frisk—52—A—589,693
American Colloids Co., Detroit, Mich.
Ser. Dec. 28, 1949 D. U. Dec. 1945

Genuis Colors—51—CE—570,909
Revlon Products Corp., N. Y., N. Y.
Ser. Dec. 21, 1948 D. U. June 18, 1945

Jentle Pearls—52—A—590,535
Towsley, Inc., Indianapolis, Ind.
Ser. Jan. 7, 1950 D. U. July 31, 1946

Kasmir Bouguet—52—A—571,200
Colgate-Palmolive-Peet Co., Jersey City, N J.
Ser. Dec. 28, 1948 D. U. Dec. 8, 1948

Kumerphyl—18—M—575,133
Endo Products Inc., Richmond Hill, N. Y.
Ser. Mar. 9, 1949 D. U. Mar. 1, 1948

La Gisee—51—C—562,847
Gisela Pernhall, DBA La Gisee Cosmetic Products, Philadelphia, Pa.
Ser. Aug. 5, 1948 D. U. Jan. 1, 1948

"L' Elu"—51—B—522,381
Societe Anonyme Dorilly, Paris, France
Ser. May 14, 1947 D. U. Since 1946

Lentine—51—ABCE—573,933
Eril Trading Co., Assignor to Beauty Bar Cosmetics Inc., N. Y., N. Y.
Ser. Feb. 16, 1949 D. U. Feb. 4, 1949

Little Princess—51—CS—560,949
F. Adorn, DBA Little Princess Products, N. Y., N. Y.
Ser. July 9, 1948 D. U. July 1, 1946

Mackenzie—51—C—568,264
C. R. MacKenzie, Ltd., Long Island City, N. Y.
Ser. Nov. 5, 1948 D. U. July 12, 1948

My Little Princess—51—BCIS—560,950
F. Adorn, DBA Little Princess Products, N. Y., N. Y.
Ser. July 9, 1948 D. U. October 1945

My Merry Manicure—22—R—581,545
Eugene L. Ach, Cincinnati, Ohio
Ser. July 6, 1949 D. U. June 9, 1949

Mury—51—BC—507,412
Societe Mury-Exportation, Paris, Fr.
Ser. Aug. 14, 1946 D. U. Oct. 28, 1943

Odalisque—51—B—575,929
Nettie Rosenstein, Inc., N. Y., N. Y.
Ser. Mar. 23, 1949 D. U. Jan. 2, 1946

Pennant—44—R—526,226 (And Des.)
Harjan, Inc., East Orange, N. J.
Ser. July 4, 1947 D. U. Apr. 1, 1947

Plaisir D'Amour—51—B—506,169
Frieda Hempel, N. Y., N. Y.
Ser. July 24, 1946 D. U. June 25, 1946

Proxite—51—A—572,201
Poor & Co., Chicago, Ill.
Ser. Jan. 14, 1949 D. U. Sept. 1, 1948

Py-Amo—51—K—558,593
Pycope, Inc., Jersey City, N. J.
Ser. June 5, 1948 D. U. June 1, 1948

Q-Soap—52—A—567,713
Q-Tips Inc., Long Island City, N. Y.
Ser. Oct. 27, 1948 D. U. July 16, 1948

Now or Never

(Continued from page 185)

and therefore not covered by any plan, even the proposed government plan. It is well known that private insurances writing accident policies will refuse to renew the policy of a person after he reaches a certain age even though this person might have carried this particular type of insurance for many years of his life and never have filed a claim. The company simply will not insure these people because they are considered "bad risks." The problem of obtaining insurance at reasonable rates for these persons further complicates the problem.

However, none of these problems are insurmountable and the problem is certainly of sufficient importance to the people of the nation and to the medical and other professions, as well as to the drug and allied industries to require solution. The medical profession, itself, must be willing to give something to develop out an acceptable and workable plan. The medical profession, or any other interested group can not merely attempt to block the government plan by pointing out possible defects of it or by telling people that it is not "free" but is going to cost them more than it is worth to the average individual in taxes. What the interested parties must do is to develop plans as rapidly as possible and get them in operation so that when the government again turns its attention to this problem, the need for government action will no longer exist. As a matter of fact, if the problem is no longer existent, the government might not again turn its attention to it at all.

There are those who attempt to unsell the people on the government plan by pointing out to them the improvements which have taken place in recent years due to new and improved drug products which have greatly shortened the duration and the mortality rates of many serious diseases, thus reducing both the danger and suffering, as well as the cost of medical care for these diseases. This does not answer the problem. People still get sick, people still require major surgical attention and subsequent care, and people still get lingering illnesses the cost of which is beyond their power to meet. If these things are so—and they are—they should merely help to reduce the cost of insurance against catastrophic illnesses.

The deductible type of policy such as is issued for automobile collision in which the first two calls in an illness will not be paid for by the insurance company seems like a method that will eliminate abuse of health insurance and thereby greatly lowering the cost of this type of insurance for the average individual. There are many ideas that might be put forward to produce an immediate workable and acceptable plan that will keep the treatment of health out of the hands of the government.

But it is clearly up to the members of this industry, as well as of the interested professions and other interested industries to put forth every effort financial and otherwise to see that the time of legislative inactivity in Washington on this subject is a period of increased activity by interested parties for development of a state of condition in medical care in this country that will make governmental action not only unnecessary, but wholly undesirable.

COMPOUNDER'S CORNER

Lipstick Cheilitis

Investigations by the Finnish dermatologist, T. Putkoner (*Acta Dermato-Venereol.* Through *Chem. Abstr.* 44:4197, 1950) revealed that the lipstick dyes responsible for several cheilitis cases were Fat-Soluble Yellow, Deep Black 1024, Brilliant Brown 1003, Ponceau Red vat dye, and lipstick Orange R. The persons affected by cheilitis were sensitive to the dyes Sudan Brown 3B, GG, 5B, RR, RRN, Bismarck Brown, Brilliant Brown, Sudan Orange Gruebler, Sudan I and III, and Sudan Yellow GG, R, RR, and GR.

Hair Bleaches

To bleach hair, says H. Van Sluis (*Perf. & Essent. Oil Rec.* 41:118, 1950), oxidizing agents such as hydrogen peroxide are principally used. The oxidizing agents generally used have, however, two disadvantages: one in bleaching hair that has been dyed: this requires too strong a concentration of the agent to effect a satisfactory bleach and it inevitably results in damaging the hair. The other disadvantage is the development of an undesirable metallic sheen and/or reddening of the treated hair. These may be due to a too strong cold wave treatment, dyeing with a henna including copper salts, dyeing with certain oxidation types of hair dyes and the like.

In common practice a given quantity of ammonia or a compound generating ammonia is added to the hydrogen peroxide (usually 20 drops of ammonia to 30 ml. of 10 to 17 volumes hydrogen peroxide solution). With few exceptions, it is unusual for ammonia to be replaced by other alkaline ingredients. As an addition to hydrogen peroxide, borax, soda or phosphates do not equal the beneficial effect of ammonia on hydrogen peroxide. Ammonia greatly improves and speeds up the oxidation reaction, which should not, nevertheless, be allowed to extend over too long a period. If other alkaline additions are used, the bleaching action will be insufficient, or the required longer reaction time will cause damage to the hair fibres.

Application of the so-called "per salts," like sodium perborate, ammonium persulphate, also shows less satisfactory results, although one still meets cosmetic formulations and preparations containing such compounds. The required long reaction time needed to obtain a satisfying bleaching effect is an objection against these types of oxidizing agents.

An exception to this rule is a bleaching shampoo containing sodium perborate or one of the similar oxidizing per salts. In using this type of shampoo the hair will be bleached only to a limited extent afer each application, resulting in hair of fair tone after a series of shampoos. Single applications, it is noted, are insufficient to damage the hair.

Van Sluis cites several European patents to illustrate the trend in bleach formulation. For example, German patent 719,029 recommends the use of hydrogen peroxide with the addition of an alkaline salt amounting to at least 50 per cent of the solids. If desired, additional thickeners may be included in this powder preparation. Two formulae are given:

I	
Hydrogen peroxide, 15%	**10 parts**
Sodium bicarbonate	**15 "**

II	
Hydrogen peroxide, 20%	**10 parts**
Potassium carbonate	**10 "**
Soluble starch (or gum arabic)	**5 "**

This alkaline addition is said to prevent metallic sheen as well as reddening of the treated hair.

Dutch patent 115,156 provides information on a jelly bleaching paste, made by incorporating sodium carboxymethyl cellulose (CMC). It is made from:

Hydrogen peroxide, 3%	**20 parts**
Sodium dodecyl sulphate (1% solution)	**30 "**
Ammonia, 25%	**part**
Sodium CMC	**2-3 parts**

According to Van Sluis, satisfactory results are obtained with a bleaching preparation consisting of two separate packages. One contains a soapless or soap-containing shampoo with an excess of ammonia. The other contains crystals of urea peroxide. Before the preparation is applied to the hair, the urea peroxide crystals are mixed with the liquid shampoo, thus changing the liquid into a creamy paste, rich in oxygen, and easily brushed into the hair. With this peroxide shampoo, undesired metallic sheen as well as reddening of the bleached hair is avoided, even in instances where the hair had just been permanently waved, cold waved or dyed.

Lanolin Hair Dressing

According to a note in the *Chemist and Druggist* (153:611, 1950), a lanolin hair dressing may be made to the following formula:

Stearic acid	**6 parts**
Liquid petrolatum	**32 "**
Lanolin	**2 "**
Triethanolamine	**2 "**
Water, to make	**100 "**

The lanolin and stearic acid should be added to the liquid petrolatum and the mixture heated to 60° C. The triethanolamine, dissolved in the water, is raised to the same temperature and added to the other liquid and mixed by stirring until cool. The consistency of the preparation may be varied by altering the stearic acid content.

Antimicrobial Value of Vitamin K_5

As noted by R. Pratt and his associates (*J. A. Ph. A.* Scient. Ed. 39:127, 1950), several analogs of vitamin K have been synthesized and one of these, vitamin K_5 (2-methyl-4-amino-1-naphthol hydrochloride) has been found to be not only a superior antihemorrhagic agent for clinical use, but also to exhibit marked inhibitory activity toward a number of parasitic and saprophytic microorganisms. Studies by Pratt and his colleagues have shown that a number of pathogenic bacteria and fungi, as well as saprophytic bacterial, yeast, and fungal despoilers of foods, beverages, and other products are markedly inhibited or killed by concentrations of K_5 ranging from 10 to 300 parts per million, depending on the organism. The low toxicity of K_5 suggests its use not only for topical treatment of der-

matophytic infections but as a preservative for pharmaceuticals, foods, and beverages. Upon oxidation the compound is subject to discoloration and, in aqueous solution, forms a flocculent precipitate, but this can be obviated by use of appropriate solvents and reducing agents. Vitamin K_5 of high purity can be prepared in almost quantitative yields from vitamin K_3 (2-methyl,-4-naphthoquinone) which, in turn, is obtained by direct oxidation of 2-methyl-naphthalene.

Modern Emulsified Creams

In testing new emulsifying agents, S. Druce (*Manuf. Chem.* 21:159, 1950) has developed and studied several formulations for cosmetic and medicated creams. In the course of this work he followed the modern trichological tendency towards the production of a cream formulated so that the *p*H is slightly less than 7. This can be achieved by incorporating small quantities of lactic or adipic acids. The following formula for a hair cream which can be used as a basis for further experiments has been shelf-tested for several months and produces a stable non-separating cream. This preparation has been favorably received by many users who normally find that a neutral or slightly alkaline cream tends to irritate the scalp.

Cetyl alcohol	**3.0**
Mineral oil	**41.0**
Sodium lauryl sulfate	**0.5**
Lactic acid	**0.5**
Chlorcresol	**0.1**
Water	**54.9**

Druce also observed that medicated skin creams can be compounded by using 0.5 per cent of sodium lauryl sulfate as the enmulsifying agent, cetyl alcohol as the stabilizer, and with oils and fats, as desired. The following three creams intended for use on the skin and scalp, incorporating substances of an acid nature, have been shelf tested for several weeks and proved very satisfactory:

	1.	2.	3.
Cetyl alcohol	**12.0**	**12.0**	**12.0**
White soft paraffin	**24.0**	**24.0**	**24.0**
Sodium lauryl sulfate	**0.5**	**0.5**	**0.5**
Water	**57.5**	**59.3**	—
Precipitated sulfur	**3.0**	—	—
Salicylic acid	**3.0**	**2.0**	**3.0**
Benzoic acid	—	—	**5.0**
White precipitate	—	**2.0**	—
Chlorcresol	—	**0.2**	—

The creams are prepared in the usual way and the powdered medicaments mixed and triturated with a portion of the cream. The remainder of the cream is then incorporated and the resulting product passed through a colloid mill.

It was found that emulsification of volatile oils, such as methyl salicylate and turpentine, can be successfully achieved by using sodium lauryl sulfate in conjunction with a stabilizer such as gum carob. A series of creams based on the following formulas has been observed for long periods and no signs of separation or discoloration were seen.

	1.	2.
Gum carob	**1.5**	**1.5**
Methyl salicylate	**10 to 30**	—
Turpentine	—	**10 to 30**
Camphor	**2.0**	**2.0**
Menthol	**1.0**	—
Tinct. capsic. conc	**1.0**	—
Glycerine	**3.0**	**3.0**
Chlorcresol	**0.15**	**0.15**
Sodium lauryl sulfate	**1.0**	**1.0**
Water . . to make	**100**	**100**

The gum carob is thoroughly mixed with the glycerine (which acts as a dispersing agent) and the water is added with stirring. The mixture is heated till it nearly boils, the source of heat is removed and the sodium lauryl sulfate is incorporated with stirring. The camphor, menthol, etc., is dissolved in the volatile oil and the oily liquid is added with stirring to the warm aqueous liquid. The cream is stirred till cold and allowed to stand for at least 24 hours to permit the escape of air.

The viscosity of the creams can be altered by varying the concentration of the gum, and if a thin cream is desired for use in bottles (as liniments, for example) the cream is greatly improved by homogenization. The thicker creams are also much improved by homogenization if care is taken to prevent emulsification of the occluded air. These creams are non-greasy, washable, penetrate readily, and with the advantage of not soiling clothes.

Superior Suspending Agent

In the *Journal of the American Pharmaceutical Association* (Pract. Pharm. Ed. 11:170, 1950), C. L. Huyck points out that colloidal magnesium aluminum silicate ("Veegum") has been used for some time by the pharmaceutical industry as a hydrophilic suspending agent and binder for tablets and it was thought that the magma might have some advantages over bentonite magma as a suspending agent in calamine lotion and chalk mixture. Magmas of colloidal magnesium aluminum silicate of 5, 4, and 2½ per cent were prepared by slowly adding magnesium aluminum silicate flakes to the required amount of water with continuous stirring until a smooth suspension was obtained. These suspensions were allowed to stand for twenty-four hours and then vigorously stirred again. The suspensions were substituted for 5 per cent aqueous bentonite magma in two pharmaceutical preparations requiring suspending agents—namely, Calamine Lotion and Chalk Mixture of the U. S. P.

Huych found that when 4 per cent magnesium aluminum silicate magma was used in calamine lotion, 10 per cent water separated and the relative viscosity was 3 in contrast to 17 per cent water separation and a relative viscosity of 2 when 5 per cent bentonite magma was used. When 4 per cent magnesium aluminum silicate magma was used in chalk mixture, 0.5 per cent of water separated and the relative viscosity was 1, in contrast to 11 per cent separation and a relative viscosity of 1 when 5 per cent bentonite magma was used.

Cold Sterilizing Solutions

Bulletin No. 4 of the 1950 series prepared by the Bureau of Professional Relations of the University of Florida's College of Pharmacy is devoted to used of Benzalkonium Chloride Solution, U. S. P. It is noted that in a concentration of 1:1000, this antiseptic quaternary ammonium compound provides a solution suitable for the sterile storage of metallic instruments or rubber gloves. However, to prevent corrosion of instruments, an anti-rust agent, such as sodium nitrite, must be added, as in the following cold sterilization solution:

Benzalkonium chloride, conc.	**20 cc.**
Sodium nitrite	**9 Gm.**
Distilled water, to make	**2000 cc.**

A more rounded product, also containing formaldehyde, may be made from:

Isopropyl alcohol	**500 cc.**
Methyl alcohol	**40 cc.**
Solution of formaldehyde USP	**80 cc.**
Benzalkonium chloride, conc.	**8 cc.**
Sodium nitrite	**10 Gm.**
Distilled water, to make	**1000 cc.**

PERFUMER'S SHELF

Ascaridol in Chenopodium Oil

According to H. Lepetit (*Trav. Lab. Mat. Med.* through *J. Pharm. & Pharmacol* 2:250, 1950), the method of the French Codex for the determination of ascaridol in oil of chenopodium gives very consistent results, but the results are inaccurate, as the factor used was determined on pure ascaridol, whereas actually the factor varies according to the concentration of ascaridol. The method recommended is as follows. Dissolve a weighed quantity of the oil, between 2.50 and 2.60 Gm., in sufficient acetic acid to make a total volume of 50 ml. Place a flask, containing 3 ml. of 83 per cent solution of potassium iodide with 5 ml. of concentrated hydrochloric acid and 10 ml. of acetic acid, in an ice bath. When this has cooled (after about 6 to 8 minutes), add, with shaking, 5 ml. of the chenopodium solution, close the flask, and allow to stand in ice for 5 minutes. Add 5 ml. of carbon tetrachloride, and titrate the iodine liberated with 0.1N sodium thiosulphate until the aqueous layer is decolorized. Carry out a blank experiment without the oil, adding finally 20 ml. of water before titration. The cooling conditions for this test should be the same as for that with the oil. If N and n are the volumes of thiosulphate solution used for the test and the blank respectively, and a is the weight of sample taken, then the percentage of ascaridol in the oil is given by the formula $0.605 (N—n)/a$. The limits suggested for the official oil are from 60 to 80 per cent of ascaridol.

Oil of Myroxylon Pereirae

Y. R. Naves (*Helv. Chim. Acta* 32: 2174, 1949) has found that the essential oil of the fruit of *Myroxylon pereirae* contains a levo-rotary, bicyclic sesquiterpene which, with hydrochloric acid, gives codinene-2-hydrochloride, melting at 117° to 118°C. Hydrogenation of this compound over Adams platinic dioxide gives a mixture of *cis-* and *trans-* tetrahydrocadinenes. Naves found that the essential oil also contains another highly polymerizable sesquiterpene and a small proportion of sesquiterpenic alcohols.

Spices Combat Rancidity

According to a note in *Science News Letter* for June 3, 1950, J. S. Aggerwal and S. C. Sethi have discovered that, aside from the value as food seasoning agents, certain spices prevent edible fats from turning rancid. Previously it has commonly been assumed that spices were added to foods, particularly in tropical countries, to cover up rancidity or decay. They report that cumin, caraway, cinnamon leaf, nutmeg, cloves, pepper, fenol tumeric and red chillies are among the spices that will preserve fats, even under very severe oxidation tests.

New Extracting Method

A new method of extracting perfumes from flowers has been described by E. Mariotti in Italian Patent 441,649 (Through *Chem. Abstr.* 44:5064, 1950). In his process, a current of air is passed over the flowers and then through active carbon. The perfumes are then elected from the carbon by ethyl alcohol at 55°C.

Ginger

In a review in the *Perfumery and Essential Oil Record*, E. Bemfield notes that ginger is one of the oldest of natural flavoring materials. It is an underground stem or rhizome from *Zingiber officinale* Roscoe (Family *Zingiberaceae*). The plant is indigenous to South-East Asia but it has been cultivated in many other countries, such as India, West Africa and the West Indies. Various forms of ginger are known on the market, as follows: (*a*) The dried rhizomes with the adhering skin are classified as black, unscraped or coated ginger. This variety is the one most used for obtaining the essential oil of ginger as the oil which is contained in the epidermis is obtained from the root after being forked up by the removal of the fibrous part and dried in the sun. (*b*) The second variety is known as scraped or uncoated ginger and has the skin scraped away with a special knife, but a little of the aroma is lost by this process. This variety is usually offered in powdered form for culinary purposes. (*c*) Sometimes the ginger rhizomes are treated with sulphurous acid or chlorine and dusted with lime so as to give them a whitish appearance. This also serves to protect the ginger from insect and mildew attacks. Various countries grow ginger for marketing, the three main ones being Jamaica, India and Africa. The Jamaica kind is usually used for essential oil distillation and for making tinctures for flavoring purposes while the African or Cochin varieties are used for obtaining the oleoresin, since these give a more pungent product and in a higher yield.

From the flavor and essence point of view, the valuable properties of ginger are due to the presence of a volatile oil, starch, and the pungent principles. To obtain the volatile oil, the rhizomes are chopped into large pieces and distilled by means of live steam. Ginger oil is obtained in a yield ranging from 0.25 to 3 per cent. The range of characteristies is as follows:

Specific gravity at 15°C	**0.875 to 0.885**
Optical rotation	**−25° to 45°**
Index of refraction at 20°C	**1.488 to 1.495**
Saponification value	**1 to 6**

Among constituents which have been identified are nonyl and decyl aldehydes, linalol, borneol, zingiberol, camphene phellandrene, cineol, citral and geraniol. The main bulk of the oil consists, however, of terpenes which render it very insoluble; the principal terpene constituent is zingiberene, a sesquiterpene containing one ring and three double bonds.

Starch is said to play an important part in the properties of the various tinctures and extracts prepared for the mineral water trade because the cloud of ginger beer and related drinks is due to the starch present.

Oleoresin of ginger or "gingerine" is obtained by extracting the powdered rhizome with acetone, ether or some other suitable solvent and evaporating off the solvent. The product varies slightly according to the solvent used and various other types such as spirit soluble, etc., are also obtainable. The pungency of ginger is found in this product and is due to the presence of two bodies, gingerol and shogaol. On

heating with alcoholic potash, gingerol loses its pungency and is split up into a ketone zingerone (4-hydroxy-3-methoxy-phenyl-ethyl methyl-ketone) and heptaldehyde.

Chypre Fragrance Variations

The variations of the chypre fragrance are discussed in some detail by T. Ruemele in *The Perfumery and Essential Oil Record* (41:173, 1950). He notes that chemically, the chypre compound is essentially an oakmoss-labdanum-patchouli complex, lightened and sweetened with jasmin-bergamot-rose. However, the popular chypre creations differ quite appliciably among themselves. Ruemele feels that the variations of the chypre fragrance might be best recognized and illustrated by the following representation:

(*a*) Oakmoss-labdanum-*patchouli*. Jasmin-*bergamot*-rose.

(*b*) Oakmoss-labdanum-*patchouli*. Jasmin-*bergamot*-rose-*ionone*.

(*c*) Oakmoss-labdanum. Jasmin-*violet*-rose.

The composition (*a*) represents the chypre compound as defined above. The composition (*b*) is almost identical with (*a*), except for the presence of ionone, and the composition (*c*) differs from (*a*) and (*b*) in the absence of patchouli and the exchange of violet for bergamot.

The incorporation of the violet note reveals a modified tonal character for both compounds (*b*) and (*c*). While the exchange of violet for bergamot (*c*) helps to intensively enrich the floral bouquet in a convenient manner, the simultaneous presence of bergamot (*b*) varies artificially the fragrance of the bouquet and confers a unique note. Thus, in one case the unadulterated floral bouquet prevails, and in the other one a fruity background of the bouquet is being retained. The presence or absence of patchouli influences similarly the fragrance. As patchouli is reputed to impart a peculiar, musty, mossy note, it is obvious that the opportunity is provided for its diffusion into the composition and presumably for its adherence to the floral bouquet, thus promoting a further shading. In (*c*), on the other hand, the potentiality of the floral bouquet remains fully preserved.

In both cases (*b*) and (*c*) the resulting initial note may now be enriched and revived so that the difference in fragrance will even be more enhanced as a result of the non-uniform compatibility of the selected adjuncts with the compound concerned. The incorporation of odoriferous substances reminding one of carnations, e.g. eugenol, will provide certain striking effects. The floral bouquet may gain perceptibly and develop. The delicacy of the nuance will be further emphasized by opoponax, the latter promoting a slight sweetening and inducing an oriental suavity. Rounding-off may adequately and potentially be provided by ambergris, castoreum, civet, musk, orris, tonquin and coumarin. Those adjuncts, blended in correct proportions, may be responsible for the endurance of the fragrance, and may give different shades of warmth and life to the compound.

Bulgarian Oil of Turpentine

A study of the composition of Bulgarian oil of turpentine has been made by D. Ivanov and C. Ivanov (*Compt. rend. acad. Bulgare sci.* 2:41, 1949). Qualitative analysis of a sample from the 1947 crop showed the presence of *l-alpha*-pinene, *l-beta pinene*, dipentene and *l*-limonene. Fractionation and optical rotation were used to analyze the sample and 64 per cent of alpha-pinene, 27 per cent of beta-pinene, 6 per cent of dipentene and limonene and 3 per cent of residue were found. It was noted that the sample was similar to Bordeaux oil of turpentine from *Pinus maritima*.

Tonka Beans

According to a discussion in the *Coffee and Tea Industry* (through *Perf. & Essent. Oil Rec.* 41:159, 1950) the tonka bean (Brazilian *cumaru*) is the source of coumarin, and the fruit of a tropical tree, *Dipteryx odorata*, flourishing in various parts of Brazil, where it often reaches a height of 100 feet. The fruit is a pod about two inches long which darkens to a mahogany color as it matures. The pod contains one shiny black seed, not unlike a peachstone, pleasantly fragrant and surrounded by fibrous pulp. The pods fall to the ground when ripe and should be at once gathered. The yield is about 20 to 25 pounds per tree. The chemical characteristics are as follows:

Saponification value	**189°**
Refraction index (at 40°)	**1.4726**
Iodine value	**66.2**
Koettsdorfer value	**190.4**
Huebl value	**66.4**

The beans are harvested in January to March, and the hard outer shells are removed by hand, the beans are spread out to dry, then bagged and shipped to buyers in nearby towns who prepare them for export by soaking in native rum (cachaca) for one or several days, and drying in the sun, whereby they become coated with a white crystalline deposit of coumarin. This latter is largely used in the preparation of tobacco, snuff, cosmetics, perfumes and foodstuffs. Its principal use in the United States is for treatment of cigarettes, for which the beans are ground and soaked in rum for about three months. The resulting fluid, rich in coumarin and highly aromatic, is drained off and sprayed over the tobacco. This extract is also largely used as flavor for cakes, candies, preserves, liqueurs, sometimes as substitute for vanilla; also in soaps and perfumery, and as fixative for colors.

Essential Oil of Melaleuca Linariifolia

In the series of studies of the essential oils of the Queensland flora, J. B. Davenport, T. G. H. Jones and M. D. Sutherland (*Univ. Queensland Papers, Dept. Chem.* 1949, No. 36, 12 pp.) report the results obtained from the reexamination of the essential oil of *Melaleuca linariifolia*. The oil distilled from the leaves and terminal brances, obtained in a yield of 1.63 per cent, had the following properties:

Specific gravity	**0.8875**
Index of refraction	**1.4785**
Specific rotation	**9.2°**
Ester value, after acetylation	**24.0**

Only traces of free acids and esters were present. A 1 per cent emulsion of the oil in 1 per cent bile salts solution gave a Rideal-Walker coefficient of 2 when tested against *Salmonella typhosa*.

An oil distilled from the cineolerich variety growing in the same area has the following characteristics:

Specific gravity	**0.9052**
Index of refraction	**1.4708**
Specific rotation	**5.0°**
Ester value, after acetylation	**26.2**

The yield was 1.9 per cent.

It is stated that all the available data obtained in this and in previous investigations indicate that the oil from *Melaleuca linariifolia* contains 45 per cent of total terpenes, 4 per cent of cineole, 37 per cent of terpenen-4-ol, 6 per cent of sesquiterpenes, 2.5 per cent of sesquiterpene alcohols, and from 0.1 to 0.2 per cent of phenols. The pathalate method failed to demonstrate the presence of any primary sesquiterpene alcohols.

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ADVANCING THERAPY

Methionine in Acute Hepatitis

In the *British Medical Journal* (1:1168, 1950) J. Strom remarks that in experiments on animals several investigators have proved that the amino-acid, methionine, affords excellent protection to the liver against damage caused both by toxins and by lack of protein in the diet. Atempts to use methionine in the treatment of acute hepatitis have been made by several authors, with contradictory results. In his evaluation of the amino-acid, methionine treatment was given in 125 slight and semi-severe cases of acute hepatitis and an equal number served as control cases. The essential facts obtained from these tests are that the cases treated with methionine tend to show a smaller increase in bile pigments in the blood and a quicker return to normal values, and consequently that the secretion of bile pigments and urobilin in the urine also ceases earlier. But, compared with the untreated cases, the difference is very small, and statistically is not significant. Definite effects cannot therefore be claimed for treatment by this method. If, however, methionine treatment had been given during the whole course of the illness the results might probably have been better, but this is problematical. Hence, in Strom's opinion, the investigation shows that a marked effect is scarcely to be expected from the use of methionine in the treatment of acute hepatitis of average severity. In more severe cases of hepatitis, however, clinical experience suggests that amino-acids may be of value when given intravenously.

Sodium Propionate in Eye Infections

In the *Journal of the American Medical Association* (143:226, 1950) F. H. Theodore reports that the lower fatty acids have recently been shown to be of great value in the treatment of external infections of the eyes. Sodium propionate (C_2H_5COONa), the sodium salt of one of these acids, has now been used in about 1,200 patients with infections of the lids, conjunctiva and cornea, and the results obtained compare most favorably with those noted with other antibiotics. Experimental studies have also been made. The drug is virtually nontoxic; it is eff ctive against all the bacteria causing common ocular infections and aga nst fungi, whose importance in ble haritis is now being appreciated and its use does not result in allergies or se sitivities.

Bacteria on Normal Skin

During their study of the germicidal efficiency of antiseptic agents, S. Chaib and H. Cerrutte (Foreign Letters, *J. A. M. A.* 143:489, 1950) observed that the human skin normally has bacteria on it, and these bacteria and the percentage of their occurrence, are:

Coagulase negative, nonhemolytic Staphylococcus albus	80
Bacillus subtilis	70
Nonhemolytic Staphylococcus aureus	25
Nonhemolytic Streptococcus	20
Coagulase-negative, hemolytic Staphylococcus	20
Coagulase-positive, hemolytic Staphylococcus albus	15
Coagulase-positive, hemolytic Staphylococcus aureus	5
Escherichia coli	5

Although most of the bacteria are nonpathogenic, coagulase-positive micrococci are frequent, indicating that strict control of antisepsis is necessary.

Intravenous Iron for Anemia

Patients suffering from a microcytic hypochromic anemia without any other clinically demonstrable pathological feature who fail to respond to oral preparations of iron supplemented with vitamins, liver, thyroid, etc., have in the past remained in a state of chronic ill-health or required repeated blood transfusions to beome symptomless. Fortunately, as pointed out by A. S. Ramsey (*Bril. Med. J.* 1:1109, 1950) these patients will respond dramatically to intravenous saccharated oxide of iron. After several doses of 100 mg. daily, or at any longer interval if more convenient, the dosage can gradually be increased to 200 mg. and 300 mg. if desired, with very little danger of any toxic side-effects. Unfortunately the total amount of iron required will not be tolerated by patients without prohibitive toxic reactions if given by single injection. Antihistamine drugs were used for some patients without preventing or reducing the toxic reactions.

However, a full course always consists of fewer than 10 injections and is the treatment of choice in refractory iron-deficiency anemia. It is the most convenient method of treating patients who are unable to tolerate oral preparations of iron and is especially useful in pregnancy and the puerperium when gastric upsets are common and a rapid response is desirable. It has been found useful in chronic ulcerative colitis, idiopathic steatorrhoea, and rheumatoid arthritis associated with iron deficiency. As the iron cannot be replaced by a single injection, oral administration still remains the best method in the majority of cases of secondary iron-deficiency anemia.

Blood Disorders from Antihistaminics

The June 24, 1950 issue of the *Journal of the American Medical Association* carries three reports of hematological disorders following the use of antihistaminic drugs. In the first of these reports, J. J. Crumbly calls attention to the occurrence of hemolytic anemia in three patients who had received antihistaminic drugs over long periods of time. Two had been given diphenhydramine hydrochloride (Benadryl) and one had been treated with tripelennamine hydrochloride (Pyribenzamine). In one case the drug was given to control attacks of asthma and in the other two cases the antihistaminics were employed to alleviate the symptoms of hay fever. In all three cases, the blood picture returned to normal upon withdrawal of the drug.

In the second report, A. W. Hilker gives a detailed case history of a patient suffering from agranuloytoses caused by tripelennamine talien for urticaria. It is stated that since the patient had taken no other medicament for eight weeks except tripelennamine hydrochloride, 50 mg. three times a day, evidence that this medicament was the agent responsible for the agranulocytosis appears to be conclusive. The rapid response to penicillin treatment after

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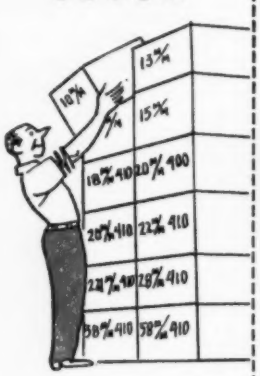

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the withdrawal of the antihistaminic drug is further evidence that the latter caused the neutropenia.

The third report, by H. S. Martland, Jr. and J. K. Guck, is similarly concerned with a case of agranulocytosis from tripelennamide, used to alleviate hay fever symptoms. These observers feel that this complication, although probably rare, is of such seriousness as to warrant periodic determinations of the blood count during prolonged antihistaminic therapy.

More Stable PAS Solution

Para-aminosalicylic acid is now widely used in conjunction with streptomycin for the treatment of tuberculosis. The most common method of dispensing the drug is by preparing a 20 per cent solution of the sodium salt of *para*-aminosalicylic acid (sodium PAS) which is formed by dissolving PAS in a sodium bicarbonate solution, the proportions being 100 grams of PAS to 60 grams of sodium bicarbonate. Since the sodium PAS solution decomposes on standing, the Eighth Veterans Administration Streptomycin Conference has recommended that the drug be discarded after 48 hours. However, sodium PAS is expensive and not easily made because of excessive effervescence. Both pharmacists and clinicians are therefore interested in how long the drug may be kept before decomposition renders it therapeutically unusable. In an attempt to clarify this point, H. Altbach and C. Hurwitz (*Bull. Am. Soc. Hosp. Pharm.* 7:131, 1950) made a series of test in which the effect of light and temperature on the rate of decomposition of sodium PAS solutions was studied. An arbitrary method based on color development was devised as a measure of decomposition. No correlation was found between color development and loss of amino group reactivity. It was found, however, that the rate of decomposition was increased by exposure to light and an increase in temperature. The use of an impure grade of sodium bicarbonate also increased the rate of decomposition.

These workers found that increasing the ratio of PAS to sodium bicarbonate from 100/56 reduced the rate of decomposition. They therefore proposed that a 20 per cent sodium PAS solution prepared by reacting PAS with sodium bicarbonate C.P. in the ratio of100/56 can be kept for at least two weeks in the refrigerator at 4 degrees C. The solution should be protected from light and should not be stored in bottles with metal caps.

Antifungal Action of Antihistaminics

Writing in *Science* (111:689, 1950), L. E. Carson and C. C. Campbell stated that a number of cases of tinea pedis or athlete's foot had responded "dramatically" to applications of a cream containing 2 per cent of Pyribenzamine. This observation suggested that the antihistaminics should be studied to determine their inhibitory action against the pathogenic fungi. Hence a series of laboratory tests were carried out to determine whether the drugs influence only the allergic manifestations incited by the fungi or whether these compounds also possessed fungistatic or fungicidal properties. The three crystalline antihistaminic compounds selected for investigation were Pyribenzamine, Antistine and di-phenylpyraline.

Results obtained from these preliminary studies suggest that both di-phenylpyraline and Pyribenzamine possess properties which are inhibitory to pathogenic fungus species and that their activities are therefore not limited to the alleviation of allergic manifestations incited by these fungi. In this report, Carson and Campbell suggest that further clinical studies were necessary to determine the effectiveness of these drugs in actual cases of fungus infection.

That this is to be done is indicated in a note in *Science News Letter* for June 24, 1950. Here it is reported that dephenyl-pyraline will be tried out in a large scale Army field test among U. S. troops stationed in Puerto Rico beginning early in July. Patients will be treated every day for 30 days, with before and after tests to detect the fungus at start of treatment and, if it has not been killed, at the end. If the chemical proves a cure for athlete's foot, it is expected to be effective also in ringworm of the scalp, barber's itch and other related fungus infections.

Khellin in Angina

As a result of their studies on animals, H. A. Dewar and T. A. Grimson (*Brit. Heart J.* 12:54, 1950) came to the conclusion that khellin, a dimethoxymethyl-furanochromone, is a powerful dilator of the coronary arterils. This agent is less intense than amyl nitrite but four times as strong as aminophylline and has the merit of prolonged action. This opinion is supported by other investigators, who had used the drug in about 250 patients with angina of effort with good results. Dewar and Grimson studied the comparative efficacy of khellin and glyceryl trinitrate in preventing angina of effort in 12 patients and the electrocardiographic changes that may accompany it. Both drugs were given in their most active form—the glyceryl trinitrate as a tablet to be chewed and the khellin as a liquid to be swallowed. They found that khellin is less potent but longer acting than glyceryl trinitrate. Khellin in effective doses did not cause unpleasant side effects and did relieve angina in one patient who was intolerant of both glyceryl trinitrate and theophylline-ethylene-diamine.

Chloroplyll in Peptic Ulcer Therapy

Many reports have shown that water-soluble chlorophyll possesses tissue-stimulating action and that it promotes healing of chronic and acute wounds, burns and dermatoses. With this background in mind, it occurred to W. G. Offenkrantz (*Rev. Gastroenterol.* 17:359, 1950) that this agent might be useful in the treatment of peptic ulcers, if the chlorophyll could be brought into contact with the site of the lesion. Through the cooperation of the producers, a chlorophyll preparation was obtained which met this requirement. In this investigation a total of 79 patients with X-ray-proved duodenal and gastric ulcers were treated with a powder incorporating water-soluble chlorophyll, a "coating" material, and recognized antacids. The treatment was not accompanied by the usual restrictions on diet, smoking, alcoholic beverages, or daily activity. Five patients were diagnosed as having duodenal ulcer with pyloric obstruction; these cases, as would be expected, showed no improvement through use of the chlorophyll preparation, and roentgenological examination after treatment was omitted. Of the remaining 74 patients, 58 showed, on roentgenological examination, complete healing in from two to seven weeks; 16 patients showed no roentgenological improvement, but of these, two experienced great clinical improvement and two were symptom-free. Of the 74 patients, 60 experienced complete symptomatic relief in from one to three days. Two had moderate relief. The remaining 12 were not benefited. No patient experienced any toxic reaction from the chlorophyll powders. There was no tendency towards constipation or diarrhea. There were no recurrences of symptoms in 20 of the cases showing complete healing, which were followed for periods of from four to 11 months.

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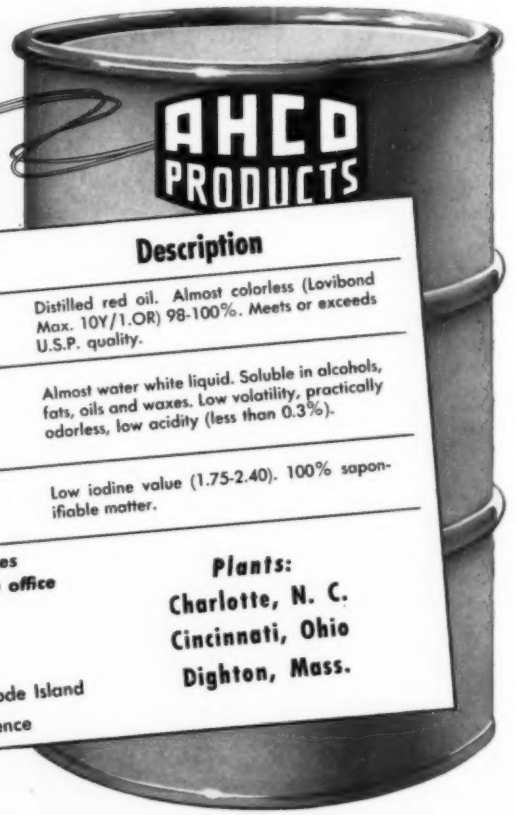

Product	Use	Description
AHCOLEIN 810	Wherever highest quality red oil is required. Soaps, creams, emulsions, etc.	Distilled red oil. Almost colorless (Lovibond Max. 10Y/1.OR) 98-100%. Meets or exceeds U.S.P. quality.
DISTILLED BUTYL STEARATE AND MYRISTATE	Plasticizer and softening agent for Cosmetics.	Almost water white liquid. Soluble in alcohols, fats, oils and waxes. Low volatility, practically odorless, low acidity (less than 0.3%).
TRIPLE PRESSED STEARIC ACID	Cosmetics, Pharmaceuticals, Emulsifying Agents, Esters.	Low iodine value (1.75-2.40). 100% saponifiable matter.

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READERS' QUESTIONS

SKIN FRESHENER: I have decided to prepare my own skin freshener because I use large quantities of it in my beauty salon. Can you give me a formula for a preparation that I can make myself. Chicago.

A skin freshener can readily be prepared along the following lines:

Boric acid	**1.0 per cent**
Witch hazel	**15.0 " "**
Rose water	**15.0 " "**
Alcohol (S.D. 39-B)	**10.0 " "**
Orange flower water	**59.0 " "**

Warm the witch hazel and dissolve the boric acid in it. Mix the rest of the ingredients with the orange flower water and add the boric acid solution. Mix, age and filter.

ISOPROPYL ALCOHOL: I should like to know if isopropyl alcohol can be used in an astringent and refresher lotion. West New York.

Actually, I can see no reason why this material cannot be used. You must remember, of course, that isopropyl alcohol has an odor which is hard to mask, and is somewhat more de-fatting than ordinary grain or ethyl alcohol.

BRILLIANTINES: We are interested in preparing a solid and a liquid brilliantine for sale as new products on our line. We want to sell them at a medium price, in other words we do not want to employ any materials which are prohibitive from the cost standpoint. Can you help us? Guatemala.

Brilliantines need not be expensive products. With respect to liquid brilliantine, I would like to quote a statement made by S. P. Jannaway, an authority in this field. He says "Mineral oil of the right degree of refinement and viscosity possesses some notable advantages as a raw material for hair oil manufacture: it is, for example, homogeneous, crystal clear, free-flowing; non-odorous, non-rancidifying, suitable for use in a spray or atomizer and capable of imparting a bright—and in effect non-greasy lustre. In contrast to most vegetable and animal oils it does not soak into the hair shaft and render it undesirably translucent and soggy with oil. Moreover, though mineral oils are not absorbed, they certainly protect the hair and scalp from drying out due to water evaporation." An oil of this sort can be colored and perfumed with suitable oil-soluble materials.

He also gives the following formula for a solid brilliantine:

Paraffin wax	**15 per cent**
Petroleum jelly	**60 " "**
Mineral oil	**25 " "**

HAIR CONDITIONER: We would greatly appreciate a formula for a hair conditioner that can be used for treating over-steamed or over-treated hair. Montreal.

The following hair conditioning preparation has been cited by Jannaway, an English authority in the field of hair preparations:

Glyceryl monostearate (tech.)	**12 per cent**
Lanolin	**4 " "**
Triethanolamine stearate	**7 " "**
Cholesterol: lecithin (1:1)	**2 " "**
Mineral oil, or avocado oil, or olive oil	**2 " "**
Distilled water	**73 " "**

NON-GREASY DERMATOLOGIC BASE: Some time ago, you published a formula for a non-greasy base suitable for incorporating precipitated sulfur and other dermatologic drugs. Could you give me the formula for this non-greasy base, which I understand was particularly suitable for use on hairy parts of the body? New York City.

I believe you refer to the ointment base developed by Downing and his associates. This formula appeared in an abstract in our December 1944 issue, as follows:

Sodium lauryl sulfate	**0.8 Gm.**
Cetyl alcohol	**15.0 Gm.**
Glycerine	**5.0 cc.**
White petrolatum	**14.0 Gm.**
Water	**35.0 cc.**

The non-greasy character of this ointment makes it comparable to a cosmetic and permits its use on areas at times not suitable for a greasy preparation. Since it is of the so-called washable type, it is easily removed from body surfaces, even hairy parts.

CONTRACEPTIVE: We have been approached to produce a product for contraceptive purposes to be packaged in capsules. Accordingly, can you refer us to source of capsules which will dissolve under body temperature and natural body fluids more rapidly than the standard gelatin capsules. Grand Rapids.

Although they may have been used for such purposes, I do not know of any instance in which a gelatin capsule was employed in the preparation of contraceptive products. Special vaginal suppositories are rather extensively used and glycerogelatine bases could serve in their production. Other types of bases have also been used.

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(*dl*-alpha-Tocopherol Acetate—International Reference Standard)

VITAMIN E

(*dl*-alpha-TOCOPHEROL)

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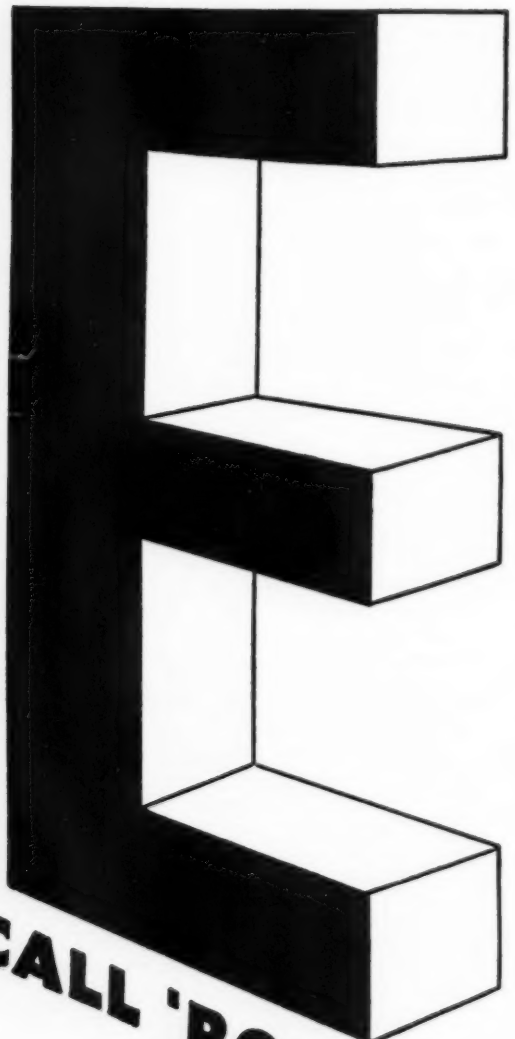

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ABREAST OF THE MARKETS

KOREAN WAR CAUSES INITIAL SCARE BUYING; DEALERS ADVISE AGAINST HOARDING SUPPLIES; GLYCERINE AND MERCURY UP

The effects of the Korean war are becoming increasingly evident, especially in the essential oil field and in certain isolated commodities indispensable in wartime like quicksilver and glycerine. The essential oil field exhibited considerable firmness in July, while the botanical market, still relatively quiet on the surface, began to develop portentous signs, suggesting an upward movement of prices within the next few months.

Spokesmen in both the essential oil and botanical fields have strongly emphasized there are ample stocks of most materials to fill all normal orders. They stress the fact that buyers should remain judicious in their purchasing habits by submitting their orders in the customary manner, without hysteria, without indiscretion.

The current unnatural rise in prices in most cases is due to one or more factors. In the first place, indiscrete buying habits, so prevalent during the first part of World War II, are being adopted. Some buyers approach dealers who are new to them, as well as their usual dealers, and purchase large orders of materials indiscriminately, without regard to price. Other buyers go to the other extreme by inquiring of four, five, or sometimes six different dealers, selecting the material from the source quoting the lowest figure. While these consumers are undoubtedly seeking the best buy for their money in this procedure they are at the same time inadvertently helping to create a false impression of the over-all market condition among the growers and producers at the origin.

It starts off with one buyer inquiring of five dealers. Each dealer in turn individually cables the origin to determine crop size or current quotations. At once the producer begins to think that five consumers are interested in his commodity instead of just one simply because he must answer five separate inquiries. Receiving this distorted view of the market, the producer immediately advances his price because of the great demand for his product. Up goes the price quoted by the dealer, and in rushes the consumer to complete his purchasing before a further revision of price. And the upward price spiral begins.

To prevent the market from becoming so distorted buyers are seriously urged to submit their inquiries to just one or, at most, two reputable dealers with whom they regularly trade.

Of course, natural shortages occur as a result of weather disturbances, such as the January cyclones in the Reunion area (geranium oil), or the drought affecting the Amazon River and collection of bois de rose. These emergencies can be dealt with successfully, according to one spokesman, by in-warehouse buying. Under this arrangement, the buyer instructs the dealer to purchase an average year's supply of the commodity and store it in his own warehouse until he, the buyer, needs it. This procedure is especially essential for those items which are produced only once a year, as is the case with 90 per cent of the botanicals.

The commodities of Eastern origin, like anise oil, anise seed star, cassia oil, and pine needle oil, to name a few, have all started an upward movement, not because any shortages have developed as yet, but because there is fear of an eventual shortage. Some hysteria has been shown in this respect, with buyers stocking up as heavily as possible.

Shortages began to develop in the botanical field several months ago, both domestically, because of labor conditions, and abroad, because of government control over marginal labor. The Korean uprising, it is believed, will tend to accentuate these deficiencies in Eastern items, especially those originating in Japan, China, and Formosa. This is all the more reason for wise buying in the months to come. Spokesmen in the field say that if each consumer buys only his average amount, there will be enough for all the rest, but if he buys frantically, he will bring on immediate shortages.

• Prices quoted in this section were current on the first of this month.

Quicksilver Very Firm

Because domestic production of quicksilver is at a record low level, and because dealers had been maintaining very low inventories of the metal, the current international scare prompted consumers to purchase what little spot material there was in late July. Spot supplies, according to one source, were being sold on a hand-to-mouth basis, dealers were so low. Prices quoted on the metal ranged from $75 per flask for orders of 1000 flasks or more to as high as $76 and $77 per flask for orders smaller than 1000 flasks.

This price rise has not occurred because of any stepped-up government orders; in fact, the government stockpile of quicksilver is estimated to be over 300,000 flasks, or more than the stockpiles of the last two world wars. Imports of the metal last year amounted to 100,000 flasks, of which amost 80,000 flasks were used for the government stockpile.

It has been reported that none of the receipts of the first half of this year (over 20,000 flasks) was used for stockpiling. Domestic consumption for the entire year of 1949 amounted to 39,857, and for 1948, 46,253 flasks.

Glycerine Higher

No shortage is forthcoming in glycerine at the present time, according to a spokesman in the trade, who has indicated that, as in other fields, scare buying is taking place as a result of the international situation. The Glycerine dealers are acting to counteract the hoarding of glycerine by selling only to their established accounts, in the full knowledge that any new accounts are merely supplementing their normal supply.

No explanation has been given for the 5c increase in the natural glycerine which went up to 29 ¾c on the inside and 30¼c on the outside on July 12. Two weeks later, the price of synthetic glycerine was also boosted, this by 4½c per pound, which set the tankcar price at 27½c f.o.b., Texas. This ad-

(*Continued on page 256*)

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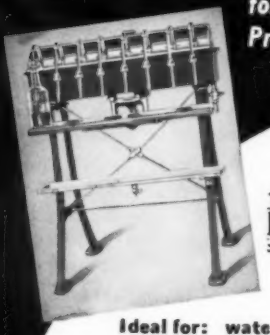

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2428 South Michigan Avenue, Chicago 16, Ill.

ORANGE OIL UP SLIGHTLY AS DEMAND INCREASES, STOCKS DECLINE; VITAMIN A REDUCED 25%; MENTHOL UP SHARPLY

Seasonal demand has apparently used up considerable orange oil, resulting in slightly higher prices. The American cold pressed oil advanced to 55c for the Florida oil and to $1.25 for the California brand, while the American distilled oil went up 5c. Imported oils, including the Brazilian (95c to $1.25) and Messina ($2.90 to $5.50) had little chance of entering the American market against such low prices.

Dodge & Olcott, Inc. issued a report on the status of orange oil last month, stating that a definite price rise in the oil is looked for in future months. Within the next ten months, according to this report, the market will be dependent primarily on California producers for orange oil, because of the restricted production of the Florida oil resulting from frozen juice operations (discussed in this column last month). Additional factors in reduced orange oil production include the higher wages in the West Indies which make it almost impossible to produce large quantities of the oil by the traditional hand methods.

Brazil has no oil to offer at all. This country during the war converted her orange crops into oil because the normal European markets which formerly showed heavy demands for the fruit, had closed. Now that these European countries are re-entering world commerce, and restoring their demand for the Brazilian oranges, this South American country is again concentrating on the fruit market at the expense of the oil.

French Guinea, another source of orange oil, has no oil to offer either, because of a crop failure, while the new crop will not be marketed until May or June of 1951.

While orange oil has been an important by-product of the frozen juice industry in Florida up to the present time, it will soon lose its importance, according to this source, because a new type of machine has been developed which crushes the orange in such a manner that it is no longer possible to obtain the oil economically. Instead, the skins are converted into cattle feed at more profit.

These machines, it is said, are being installed on a large scale in the frozen juice plants. This development, plus the fact that one of the largest expresser and concentrator plants which used the old type equipment was recently destroyed by fire, will further curtail the Florida orange oil production.

Vitamin A Reduced 25%

Hoffmann-La Roche last month announced a 25% reduction in the basic price of synthetic vitamin A which is now quoted at 18c per million units. This cut is attributed to the efficiency of operation in the manufacturing.

With this latest reduction, the margin between the prices of the vitamin made synthetically and the vitamin A concentrates derived from fish liver oils has been cut to 3c per million units, since the vitamin concentrates range from 15c to 22c.

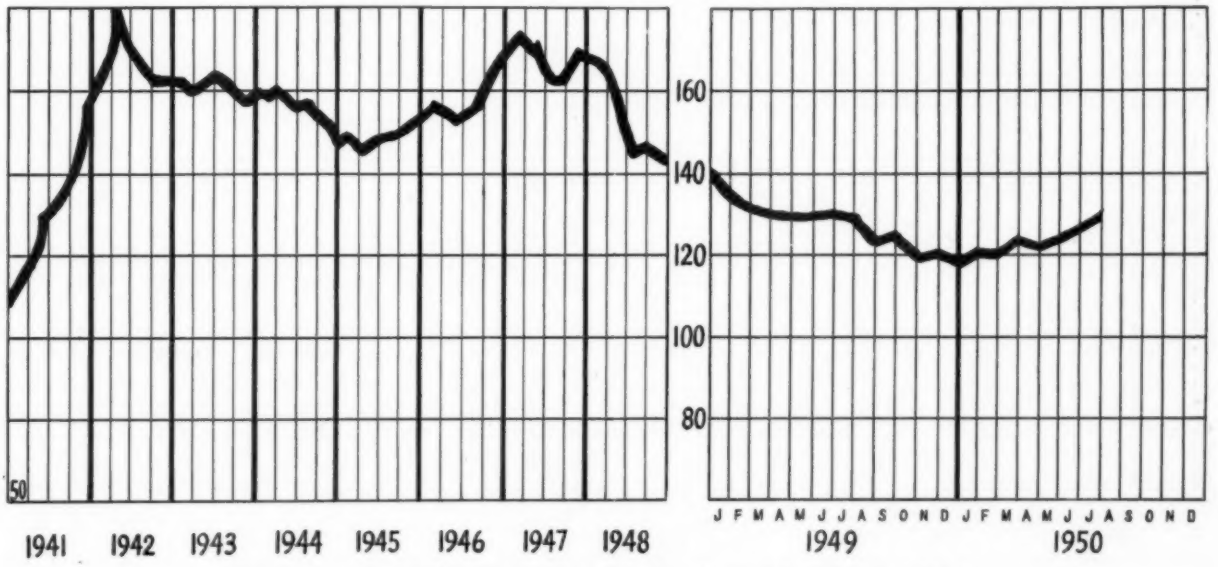
Abrupt Reversal in Menthol

The downward price trend of menthol was abruptly halted during the first week of July, and by the end of the month the commodity was selling for $12.50 a pound, or $1 more than the $11.50 which has been quoted in late June. In view of the conditions in the Far East, according to a spokesman, the price may continue upward, should Red China, major source of menthol at the present time, close her ports to shipping. Up to the end of July, however, shipments of menthol had arrived to the United States without difficulty, including one of over 12,000 lbs. during the middle of the month.

Brazil has still made no attempts to enter the menthol market, having sold considerable amounts to private concerns and to foreign countries. One report has said the menthol crop was smaller than usual in Brazil this year, which may also account for the lack of competition. Earlier in the year it had been predicted that the South American dealers would postpone issuing offers until the Chinese market had forced the menthol price up to an attractive level.

Although there was still no concrete reason to believe the Chinese source of supply would be cut off from the rest of the world, New York dealers by the

50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for July advanced from 127.7 to 131.1.

JULY PRICE CHANGES

UP

Almond Oil, Bitter $1.25
Anise Seed Star 4c
Anise Oil, U. S. P. 20c
Balsam Tolu 10c
Bay Oil 30c
Benzoin Gum Sumatra 2c
Bergamot Oil 20c
Bois de Rose, Brazilian 15c
Calamus Oil $4
Camphor Oil Sassafrassy 20c
Cananga Oil, Native 25c
Rectified 25c
Cantharides, Chinese 15c
Cedar Wood Oil 4c
Celery Oil $2.25
Citronella Oil, Ceylon 10c
Coriander Oil $2.50
Dandelion Root 5c
Dill Oil 30c
Eucalyptus Oil 5c
Eugenol 28c
Geranium Oil, African $1.50
Bourbon $1.50
Glycerine CP 5c
Lavender Oil $1.30
Lavender Spike Oil 40c
Lemon Oil, Calif. 35c
Lemon Oil, Italian 30c
Menthol, Natural $1
Mercury $4
Orange Oil, Amer. Cold Pressed 6c
Amer. Distilled 5c
Papain, Pure, Powd. 25c
Phenylacetaldehyde 10c
Pine Needle Oil 35c
Pinus Pimulio Oil 25c
Sandalwood Oil 50c
Sassafras Oil 20c
Artificial 10c
Spearmint Oil 85c
Spruce Oil 50c
Thyme Oil, red NF 30c
Thyme Oil, white NF 30c
Wormseed Oil 45c

DOWN

Anise Seed Star, Spanish 5c
Buchu Leaves 5c
Citral 50c
Citronella Oil, Java 25c
Cumin Oil $1.75
Fennel Oil 35c
Iso Eugenol 17c
Peppermint Oil, Redist. 50c
Petit Grain Oil, S. A. 10c
Vanilla Beans, Bourbon 75c
Mex. Whole 25c
Vetivert Oil, Java 50c

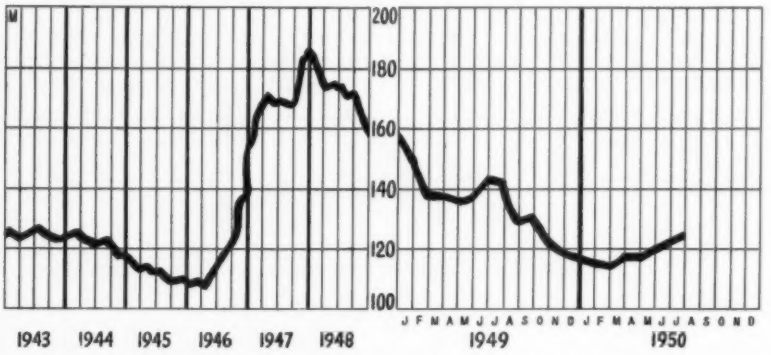
end of July had definitely shown they would take no chances. What stocks they had, they intended to hold and sell piecemeal until the foreign horizon brightened, or until ample shipments arrived at their ports.

Glycerine Higher

(Continued from page 253)

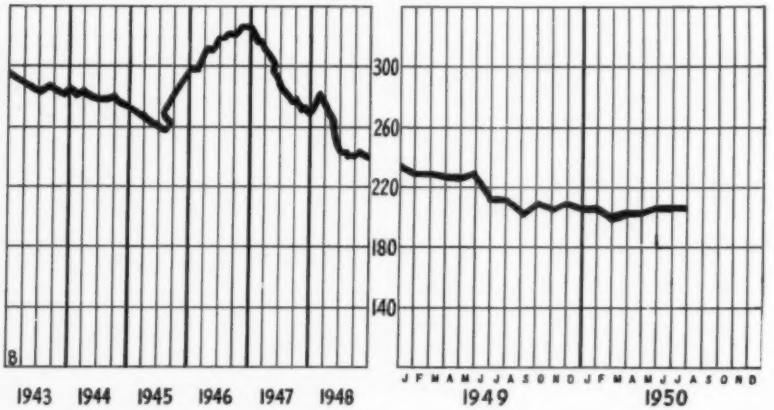
vance in the synthetic material is about the first major change in price since its appearance on the market in October of last year.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index advanced from 123.9 to 125.1. Menthol and mercury were higher.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index declined very slightly from 205.1 to 205.0. Balsam tolu went up; buchu leaves went down.

For the time being, glycerine appears to be in a safe position, and production during August and September is expected to be greater than normal because of increased buying of soap, source of natural glycerine.

Production of both natural and synthetic glycerine in May amounted to 18,763,000 pounds, which was greater than that for the month of April (18,325,000 pounds) by 438,000 pounds. Stocks at the close of May dropped to 52,400,000 pounds from 54,491,000 pounds on hand at the close of April. During World War II a supply of 50,000,000 pounds was considered a safe level.

The 5c advance of the Natural glycerine last month was the first jump since March, 1949. The official market price during the price control period in the last war was 55c per pound, but outside lots were commanding a much higher level. The high for 1939 was 29c and the low, 19½c per pound.

Botanicals Becoming Firmer

A few botanicals advanced last month, beginning a forward trend which, according to one spokesman, is going to become more pronounced as time goes on. As predicted some months ago, this tightening up would have occurred naturally, because of labor conditions in the domestic and foreign markets, but the Korean conflict has apparently hastened the action along. Anise seed star advanced 4c, to be quoted at 25c, and Chinese cantharides went up 15c to $1.25. Both of these items have Chinese origin. One source has indicated that there are no supplies of cantharides whatsoever at the origin.

Dandelion root, a domestic crop went up 5c to the range between 45c and 50c, because of the small stock on hand.

Vanilla Beans from Puerto Rico

Mexico as a source of vanilla may soon have to meet competition from Puerto Rico, where experimental cultivated hybrid vanilla plants have already been produced by Dr. Lewis Knudson, Cornell University. He worked with seeds produced at the Federal Experiment Station in Puerto Rico, which wishes to establish a vanilla industry to aid the territory's economy. No one was able to produce the vanilla plant from seeds until the 1930's, and no hybrid seedlings had ever been produced. Dr. Knudson began his work in 1938, and after many years of experiments, discovered that vanilla seeds would not germinate with the use of

methods for germinating other orchid seeds (the vanilla plant is an orchid). He found that, in addition to keeping the seeds in the proper nutrient, they had to be maintained at higher temperatures than usual for a longer period of incubation. Four years later Dr. Knudson succeeded in producing seedlings from hybrid seeds, the first time hybrid seedlings of the vanilla plant had been produced.

Geranium Oil Up Again

Both the African and Bourbon varieties of geranium oil advanced once more in July, continuing the trend which has been in progress since the beginning of the year. The African oil is quoted from $19 to $20, and the Bourbon, from $20 to $22. Some of the other oils which advanced, not because of the Korean affair but because of long-term shortages, are bitter almond oil ($4.50), bois de rose, Brazilian ($3.65 to $4), calamus oil $21, native cananga oil ($4.50 to $5), celery oil ($18 to $20), dillweed oil ($5.25), and lavender oil ($3.50 to $4.75). The lavender spike oil also advanced, in sympathy with the lavender oil and is now quoted in the range from $1.50 to $2.00.

Citronella Oil Up

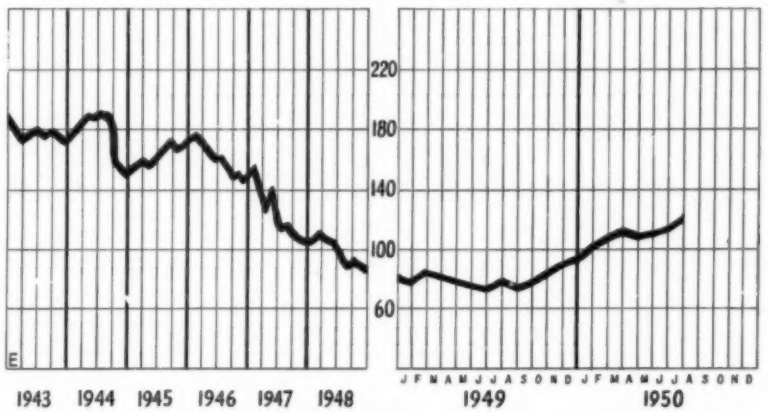
Ceylon citronella oil advanced 10c last month and is quoted from $1.25 to $1.45, while the Java type oil declined from $1.85 to $1.60. World supply of the oil appeared to be more than sufficient for most requirements during the first half of 1950. The Formosan oil has been sold out and has been taken over by the island of Java.

Citronella oil exports from Indonesia during April 1950 consisted of 16 metric tons valued at 381,000 guilders, as compared with 12 metric tons, valued at 211,000 guilders, in the preceding month.

Dillweed Oil Higher

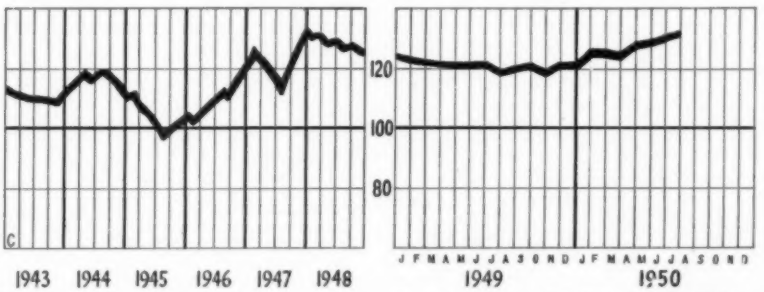
Although the crop condition at the present time in the domestic area suggests that the Fall yield will satisfy all requirements, dillweed oil jumped in price last month by 30c to the range of $5.25 on the inside and $6.00 on the outside.

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oils index advanced considerably from 112.2 to 120.7. Anise, bergamot, bois de rose, cananga, citronella, eucalyptus, geranium, lavender, lemon, and sandalwood oils advanced.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



The cosmetic raw materials index advanced slightly from 129.8 to 131.3. Balsam tolu, glycerine, and menthol were higher.

Bourbon Vanilla Beans Reduced

Bourbon vanilla beans fell off 75c during July from the previous range of $4.50 to $4.75 to the current level of $3.75 to $4.25. Mexican whole beans were quoted at $7, or 25c under the previous month's figure. The price reduction has been attributed to increased demand, both domestically and in Europe, along with increased competition. One dealer has pointed out that the bourbon beans are today quoted at a price which was at the same level as much as fifty years ago.

Papain Continues Advance

With papain prices having advanced 25c, to the range between $2.50 and $2.95 last month, one source offered the prediction that the price may soon be as high as $3.50 or $4. There is very little papain either on spot or at the origin.

Spearmint Oil Advances

Spearmint oil, which usually follows peppermint oil closely, proved to be an exception last month when it advanced 85c to the current range from $4.25 to $4.85. New crop oil is expected to demand higher prices than current stocks. Similar trends were exhibited in bergamot oil which advanced 20c to $4.65 and bois de rose, which advanced 15c, to $3.65.

Peppermint Oil Unsteady

Varying opinions have been expressed on the price change in redistilled peppermint oil which fell off 50c in July to the range between $6.75 and $7.40. The natural oil remained at $6.50. One belief is that current stocks are selling at reduced prices because the new crop under way is expected to be quoted at a lower figure. It has been reported that dealers wish to use up as much of the old stock low-menthol content oil as possible before the new crop enters the market. Some sources maintain that the new oil will be of higher grade than the left-over oil. The contrary view, held by other sources, is that late July and early August is too premature to predict prices and qualities of the coming crop.

As for the prospects of a good crop in September, reports from Indiana and Michigan have been unfavorable, due to wet weather and strong winds. In the Pacific Northwest, however, reports are much more favorable, and may be the reason for lowered prices on the redistilled oil.

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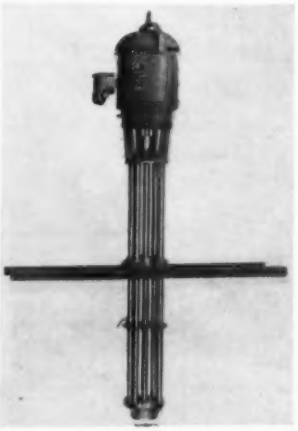

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INDUSTRY'S BOOKS

Perry's Chemical Engineers' Handbook, Prepared by a Staff of Specialists, and edited by John H. Perry, Technical Investigator, E. I. duPont de Nemours & Co., 1884 pages, 7¼ x 9⅜, McGraw-Hill Book Company, New York, $15.

The new 3rd Edition of Perry's Chemical Engineers' Handbook provides a virtually complete revision of this standard chemical engineering reference work, including a fresh and comprehensive coverage of both standard and recently compiled facts, figures, and methods applicable to both chemical engineering and its related fields. An authoritative group of more than 140 recognized specialists have contributed detailed explanations of new developments in every branch of the industry—including those of recent critical years—to bring the Handbook up to date on currently-approved technical data, new procedures, new equipment, etc. In addition to many expanded and wholly revised chapters—and several almost completely rewritten major sections—this new edition features several entirely new sections. These provide important information pertaining to Furnaces and Kilns, Size Enlargement, General Theory of Diffusional Operations . . . Azeotropic, Multi-component, Extractive and Molecular Distillation,—and Dialysis. Other improvements included are: (1) an increased coverage and new treatment of low-temperature refrigeration and processes; methods of mechanical separations; and sublimation (2) extensively revised material on flow of fluids; heat transmission; solvent extraction; mixing; absorption; physical and chemical data; physical and chemical principles (3) new presentation of humidification; dehumidification; spray ponds and cooling towers; mathematics; mathematical tables and weights and measures (4) a thorough revision of material on fuels; electrochemistry; refrigeration, electricity and electrical engineering; materials of construction; mechanical separations; safety and fire protection; accounting and cost finding (5) greatly expanded material on size reduction; power generation; process control; high pressure technique; plant location; gas absorption; movement and storage of materials. More than 2000 charts, diagrams, cross-sections, flow sheets, etc. are included, and all drawings have been newly prepared and increased in size to present every detail more clearly.

The Common Infectious Diseases, by H. Stanley Banks, M.D., Physician-Superintendent, Park Hospital, London, 354 pp., Illus., The Williams & Wilkins Co., Baltimore, $6.

In this book the author has set down the teaching imparted to the students of Saint Bartholomew's and Guy's Hospitals, as well as to postgraduates attending courses at the Park Hospital or attending lectures in Infectious Diseases at the British Postgraduate Medical School, London. In the teaching of infectious diseases certain general matters having common affinities with more than one disease are often relegated to separate chapters. The author of this work has followed here the method, adopted in his lectures, of dealing with such matters in the chapter in which they most naturally arise. Thus, for example, serum sensitivity and a sterile syringe and needle service are dealt with in the chapter on scarlet fever, the control of air-borne infections in hospital wards in the chapter on measles, technique of blood culture in the chapter on typhoid and paratyphoid fever, and intravenous and other transfusions in the chapter on gastro-enteritis of infants. New ideas, methods and modifications of established practice have poured out in a continuous stream during the past 20 years and many of them have been gradually absorbed into current practice. Examples are the intensive intravenous antitoxin treatment of hypertoxic diphtheria, the short isolation period in scarlet fever, the abolition of repeated lumbar puncture for drainage in meningococcal meningitis and later the abolition of serum treatment and of intra-thecal penicillin in that disease, high dosage of sulphonamides for infants in proportion to their weight, the concept of encephalomyelitis and of non-haemorrhagic adrenal lesions in meningococcal fevers and the frequency and extent of pulmonary collapse in whooping cough. Particular attention is paid to such matters in this text.

Chemical Engineering Plant Design, by Frank C. Vilbrandt, Ph.D., Head, Department of Chemical Engineering, Virginia Polytechnic Institute, Third Ed., 608 pp., McGraw-Hill Book Co., Inc., New York, $6.

Chemical engineering design is divided into equipment design and plant design; it is the purpose of this book to deal only with the latter phase of design as applied to the chemical industries Chemical engineering plant design is neither a unit operation nor a unit process, but must be considered as one of the tools of the chemical engineering profession. As a tool this book is presented as an analysis of the fundamental principles and factors that are involved in the development of a technically and economically efficient plant process from the laboratory stage through the pilot plant stages to the commercial size unit. Following the close of the war there became apparent a need for more cost-estimating date for the process industries, a need for new, extensive sources of data for operating and equipment costs, and a need for revisions of cost data to keep them up to date. A considerable part of the data along these lines, accumulated since the close of the war, has been compiled and included in the chapter on preconstruction cost estimating, which has been materially revised, expanded, and brought up to date.

An Introduction to Pharmacology and Therapeutics, by J. A. Gunn, M.D., Emeritus Professor of Pharmacology and Therapeutics, University of Oxford, Eighth Ed., 301 pp., Oxford University Press, New York, $2.25.

The Eighth Edition of this work contains new sections on Chemotherapy, Penicillin, Sex Hormones, and Coagulation of the Blood; all chapters have been revised and many of them largely rewritten. It contains a brief account of the Vitamins, and also of Vaccines and Antitoxins. Some of the more important official drug preparations are mentioned to acquaint the reader, not only with the reasons why drugs are given as remedies, but also how and in what doses they can most appropriately be administered.

Why New Product Programs Fail

(*Continued from page 179*)

expression of the woman, in the rough layout for the package insert, is to be made more pleasant, and she should look a few years younger. When these improvements have been made, the Research Manager is to be requested to submit proposals for another consumer jury test. Also, the new names must be checked with Legal for trade-mark clearance before being submitted to the salesmen for a vote. The Laboratory is to try to improve the flavor of the Foaming Dentifrice, in view of the President's memo on how his five year-old granddaughter detests the taste, and threw up her supper after using it.

While laboratory efforts to perfect the product are in process, the agency Account Executive is to draw up a new media schedule; the first year's appropriation of $575,000 is to be split half and half between magazines and spot radio, or perhaps television, and newspapers are to be eliminated entirely.

And so it goes week after week, month after month.

When the first market test (Amazo-Vim, the *Modern* Female Tonic) finally begins (in Binghamton, Hartford and Peoria, with appeals to different age groups in each, plus three variations in the opening deal, display material and wholesalers' salesmen's bonus) the New Products Department has reached its second—and final—birthday. The test campaign results prove both disappointing and enigmatic (the first month's net volume in the three cities is less than the salesman's expense account, and differences in over-the-counter sales between the different appeals and marketing methods are indiscernible). On top of this denouement, over-all company profits dip badly in the same quarter. Coming together, these dolorous developments bring about a critical re-evaluation of the New Products program.

As the President puts it in his memo to the Chairman of the Board "Though we have paid dearly, the price may still be cheap in the long run. We now know that under today's conditions, with rigid Government controls of formulas and advertising, it is impossible to make any consumer products different enough to succeed. It is my recommendation that from now on we should buy—not try to develop—new products."

And so, as we take leave of our hypothetical protagonists and this greatly condensed version of their tribulations, we find the Vice-President in charge of New Products interviewing his people one by one, explaining that the program is to be curtailed, that the company appreciates the fine service that has been rendered, and that they may use the office for the next two months while looking for another job.

Though open to the criticism of over-simplification, this brief narrative defines the contention made in the beginning that New Products programs fail primarily because of: (1) lack of clarity in setting up goals and objectives, and (2) once the program is under way, an excess of caution and timidity of decision that cause

costly delays in submitting ideas to the decision of the market place. There are a couple of points that merit special mention or emphasis in our catalog of confusion, though already covered in passing.

(A) *The New-Old Product:* This, again, is best explained by an example. The object of search, let us say, is a dentifrice. Everyone knows that in a dentifrice flavor is the most important factor, so this is emphasized in the product specification that is passed on to the Laboratory. After a detailed explanation of what is required, the statement ends: "In short, we want a flavor close to that of 'MOL-O-GLEAM'—but it must be entirely new, different and distinctive." Somehow nobody sees any paradox here. The Laboratory's job is simply to produce a dentifrice that tastes like one already on the market, but then to "add a little something that gives it a different character." Chemists caught on the horns of this dilemma have been known to wind up in the Mental Patients' Ward.

There's a twist on this one that similarly affects the marketing people. They are charged with submitting an introductory campaign on a new item, and the campaign—they are told—must be "really original . . . something new under the sun." The boys squeeze their brains dry, and come up with some pretty dramatic innovations. They present their ideas with a flourish, and sit back for comment. When the meeting ends five hours later, they find that their plan has become practically the twin of the one used back in 1923 to introduce the company's now famous indigestion tablet.

(B) *The Chicken or the Egg:* In developing ideas for a New Product, it is not only desirable, but necessary, that its features be capable of easy dramatization in advertising. Therefore, the advertising voice carries, as it should, great weight in the council chamber. But there's a danger here, too.

It sometimes happens that an advertising executive thinks up a product and sells his associates on its tremendous possibilities before any appraisal of the technical problem has been made. With everyone's heart set on the product as described by its happy creator and as it exists in his vivid but unhampered imagination, the relatively simple job of producing the item is assigned to the laboratory.

Not wishing to appear negative, the chemists start work. The problems of stability and toxicity are attacked with zeal, but time is required and before long there is pretty certain to be a lot of angry muttering that "we'd have the product on the market if those unimaginative damn hair-splitters would show some sense." As the facts come to light, however, it is conceded that a few compromises will have to be made . . . and the result of these, more often than not, is that the product loses the daring difference that gave promise of such easy victory. But it takes a long time, a lot of money, and some pretty hot arguments before this conclusion is accepted.

These observations have not been made in a spirit of criticism, but rather in the sincere hope that they

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The Korean War found the sages of Wall Street with their mouths open. More exactly, the self-styled Architects of the Future were caught with their plans down and their assets exposed.

•

Stocks worth Twenty Dollars, but listed at fifty, dropped to thirty. It was a 40 per cent loss for some, a 50 per cent reduction of profits for others, and a Red Bear market for local yokels who insist Wall Street invaded North Korea in the first place.

•

But no matter the cost of the Korean tragedy, Science is already a beneficiary. We have long known that "Parallel Lines Never Cross," but many of us have learned that those observing the 38th Parallel often double-cross.

•

Until the current fight made uniforms fashionable again, "A Korea Man" was just the pronunciation of a Harvard man in the State Department.

•

And Russian claims that South Korea invaded Red Korea contributed a fundamentally new concept to Military Science: It's the first time in the ugly history of warfare that an invasion was accomplished by retreat.

•

In all fairness, however, the Soviet charge of Wall Street responsibility for the Korean War is not without some substantial fact: Wall Street did help peddle the Victory Bond Issues which paid for Lend-Lease that bought Russian tanks, planes and guns now being used by the satellite Koreans.

•

Cautiously deliberating all factors in the Far East conflict, the Cosmetic Industry suspects a strong similarity between the Spanish Civil War and the Korean:
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will help identify symptoms that endanger the success of a New Products program. Almost every company must look to this source for expanding sales and profits, yet along the way there are lessons that each new Management seems to have to learn for itself. Unfortunately, the learning process involves great economic waste, and some fine people can be badly hurt. Stockholders, whose money is wasted, and workers, whose time and talents are wasted, have every right to blame a Management that fritters all three away on an impractical and immature vision. Whether two people or two hundred people are involved, it's just plain wrong.

This then, in its own strange way, is a plea for a greater sense of reality, a better definition of objectives and a longer-range outlook in planning programs to develop new drug products.

Educating the Salesmen on New Products

(*Continued from page 189*)

b. Selection from these facts those which are pertinent to the selling of the product, and
c. Methods of presenting this information to the Field Force.

Collection of Product Data

From the standpoint of collection of data, each product is an individual case and must be carefully evaluated. Each product is surrounded by conditions which differ from those of any other product, therefore, a training program must be flexible and sufficiently broad in its range to be easily adapted to the circumstances surrounding a given product. I feel that flexibility is important enough to merit emphasis, lest we make the mistake of relying on a stereotyped procedure to fit all products. Some examples of these product variables are:

The Nature of the Product: Does it introduce a new field of therapy, examples of which would be the first sulfa drug, the first antibiotic, or the first antihistaminic; or is the product entering an already established market? In the first case, considerable attention must be given to therapeutic usefulness, whereas in the second case, the product advantages must be stressed.

The Product's Potential: Now does the product have a large dollar potential or does it have a relatively limited potential? In the case of products having a relatively small potential, it is important to direct the representative's efforts to the most fertile channels of sale, otherwise the law of diminishing returns works to the manufacturer's disadvantage.

Previous Experience of the Field Force: If a company introduces a new product into a market which is foreign to its regular line, it is essential that the representatives be given a background of information covering the usefulness of the product. An example could be the introduction of a new antacid product. Obviously such a manufacturer would be obliged, if they are to approach maximum selling efficiency, to employ a product in-

troduction program which would markedly differ from that of another company whose sales force had been selling antacid products for some time.

The collection of product data, which are usually available within the company's own ranks, is probably the simplest of the three phases of a product introduction program. (a) The research and development sections can provide the formulas as well as the technical and therapeutic reasons for the inclusion of each ingredient. Frequently, they can supply other data pertinent to sales such as the inclusion of small amounts of substances other than the therapeutic agents, which are added to stabilize liquids, for giving tablets greater resistance to breakage, etc.—(b) The clinical investigation section can be relied upon for the product's indications and uses and for the official dosage recommendations.—(c) These two sources may be supplemented by articles appearing in medical literature.

Selection of Data to be Presented to the Field Force

From the tremendous amount of data collected, the selection of that material which will be useful to men is a more difficult task and a major part of the success of the program depends on this phase of the work.

Data presented to the representative must be carefully screened for its usefulness in selling the product. Too much irrelevant information will only confuse the men, and may lead them into technical discussions rather than sales discussions with their customers. The omission of pertinent selling data will materially limit the men's efficiency. It must be kept in mind that the representatives of pharmaceutical manufacturers are employed for the sole purpose of selling merchandise; they are not public relations men, nor are they physicians or scientists. This does not mean that product information should be devoid of technical data, but such data must be carefully selected for its adaptability to selling and it is always helpful to interpret technical points into selling points. Briefly, subject to the specific conditions represented by each product, we find it useful to supply our men with product information which includes the following general subjects: Description of product,—Indication and uses,—and Dosage and Administration.

To supplement the basic product data, additional information is given which may be classified as "sales data." This phase consists of an interpretation of the technical facts into selling ideas. It is felt that while most of the men in the field force are capable of converting the essential facts about a product into sales points, doing so for them offers several advantages. (a) It saves them time. (b) It eliminates the trial and error operation by the men. (c) It creates a uniformity in the information given out. (d) It increases the men's confidence and results in a much greater degree of enthusiasm.

Competitive products are analyzed so that the men will have an accurate knowledge of how the product stands with relation to others in the field. While it is obvious that comparisons are made which will show

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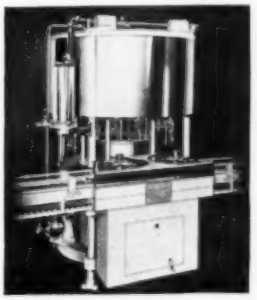

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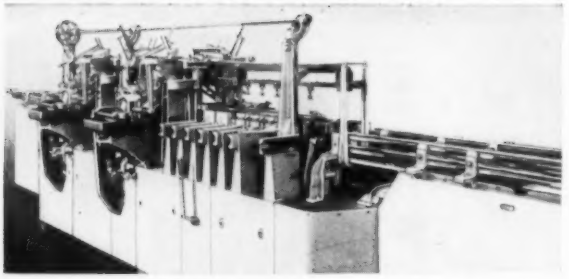

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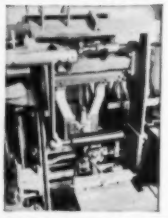

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The representatives are given a review of the sales aids, such as literature pieces, reprints, and samples. These are prepared at considerable expense and are an important part of the promotional program. Their effectiveness in producing sales is dependent on the manner in which salesmen use them, therefore, considerable attention is given to make sure the men thoroughly conversant with their contents and use.

Presentation of Product Data

I stated earlier that the individuals responsible for the training program must assume a "selling attitude." Sales programs consist of two parts, namely, "planning" and "execution." Now in the case of selling to our own salesman, we must first decide what we have to sell and then organize these items in an orderly sequence. Some of the items we must sell, subject to individual product variations, include: (a) The product itself, what it is, what it is for, and how it is used. (b) Sales promotion ideas; methods of detailing, methods of stocking, etc. (c) The sales aids—and their proper use. (d) How to analyze the territory with respect to the sale of the product. (e) How to sell the product to customers. (f) How to handle customers' objections. (g) and, of course, Product advantages.

In considering the methods of executing the program, that is the actual presentation to the Field Force, there are two major routes by which this can be done. The data can be organized in printed form, with or without visual interpretation, and mailed. This method is essentially a mail-order selling campaign. The other method is a form of selling by personal contact through the medium of sales meetings, these being conducted by individuals from the home office or by properly trained field managers. Each method has its place in a flexible training program and the choice is dictated by the nature of the product and its importance sales-wise. If, for example, the product is simply a new dosage form or is a minor variation of a product with which the sales force is already familiar the forwarding of the data by mail is probably preferable for economic reasons. On the other hand, in the case of a product which has potentially a large market or represents a new type of therapy it is preferable to present the product by means of sales meetings, as this method, although more costly, is much more effective.

Two types of sales meetings can be held, the lecture type and the conference type. The conference type is to be preferred. When the training process is considered in terms of selling to the salesmen, it is obvious that the ideas, etc., cannot be sold by a one-way conversation any more than a salesman can sell by

monopolizing the entire sales interview. Small meetings are usually more desirable than large meetings for several reasons. It is easier to sell to a small group than to a large group. Small groups encourage the men to express their viewpoints or to ask questions. It is also more economical to go to the men than it is to bring a greater number of men to a central point. If the sales force consists of several hundred men it is advisable to rely on the field managers, provided they are trained to handle the assignment. This is the manner in which we operate. Our District Managers are trained in the methods of educating their men. All the essential information, equipment, and materials are prepared for them and they in turn assume the responsibility of selling same to the men. Since they work closely with the men, they can follow-up the ideas they have presented and can quickly detect and correct deficiencies that may occur in the field.

The principles of salesmanship are the same as though we were selling a product to a customer.

a. We must have a complete knowledge of what we are selling and have our facts organized in an orderly sequence. Sales are not made by haphazard loose chatter.
b. We must be thoroughly sold on our product and our selling ideas.
c. We must fully describe our product. This means the product itself and the "selling tools" to be used.
d. We must be enthusiastic. Enthusiasm is contagious.
e. We must create interest and attention.
f. We must appeal whenever possible to all five senses; sight, hearing, taste, touch, and smell, if we are to successfully sell. Visual impressions are conceded to be the most effective. Hearing is rated second. The most effective form of visual demonstration of the poduct is the product itself. The men should be permitted to feel and handle, shake the product and to see and examine the package circular. If the product has taste appeal, or a pleasant odor, they should taste and smell it. Frequently, the physical characteristics of the package itself possess many selling advantages. We employ several types of visual aids and consider them indispensable for getting across both tangible and intangible selling ideas. Your next speaker will discuss this phase of selling in detail, therefore, I have omitted its consideration here.
g. We must give the men a reason to buy our promotional ideas and to be sold on the product. Make them feel that they are working with us, not merely for us, by giving them the "why." When they are given the feeling of "belonging" and that they are an indispensable part of the program they buy more readily.
h. We must close the sale by asking for the order. Accordingly we must ask our men, for they are our customers, to buy our selling ideas. Stimulate

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the men to think by asking questions. Questions, carefully designed to bring out important points, force the men to use their own thinking process and thus increase retention of the facts.

The "learn by doing" process is also a useful tool. Pose typical examples of situations they are likely to encounter and thrash out the situation in conference style. Help the men analyze their methods and guide the problem until you get the answer you want. By this method the men feel that they have developed the selling ideas themselves and what's more they will use them. This is good selling. It is also good sales training.

The Prescription Legend

(*Continued from page 181*)

such exemption shall apply only if such drug is dispensed upon a written prescription of a physician or dentist licensed by law to administer such drug or upon an oral prescription of such physician or dentist which the prescriber agrees to confirm in writing within seventy-two hours, or is dispensed by refilling a prescription if such refilling is authorized by the prescriber in the original prescription or by oral order and agreement of the prescriber to confirm such order in writing within seventy-two hours.

"The Administrator may by regulation remove drugs subject to section 502 (d) from the provisions of this subsection when such requirements are not necessary for the protection of the public health.

"A drug which is subject to clause (1), (2), or (3) of this subsection shall be deemed to be misbranded if at any time prior to dispensing its label fails to bear the statement: 'Caution: Federal law prohibits sale or dispensing without prescription.'

"The act of dispensing a drug contrary to the provisions of this subsection shall be deemed to be an act which results in the drug's being misbranded while held for sale."

The Gluconates

(*Continued from page 193*)

recognized for many years, and its association with anemias and blood formation processes was established many years ago. Recently, with the discovery and isolation of Vitamin B_{12} and folic acid, renewed interest has occurred as regards the role of iron in blood formation and regeneration processes.

Recent investigation has shown that specific chemical combinations of iron are superior to others as a therapeutic or supplemental source of iron. It appears that iron in the ferrous state is several times more effective than ferric salts for increasing red blood cell formation. Furthermore, the iron salt must be soluble and ionizable for efficient absorption and utilization. In addition, large doses may be required for therapeutic efficiency, and tolerance to the form administered is generally required for prolonged therapy.

The investigations which elucidated the role of

Vitamin B_{12} and folic acid have indicated that a source of iron should be present together with these specific dietary factors in certain conditions of anemia. Investigations over the past decade seem to indicate that ferrous gluconate represents an ideal source of iron for the treatment of iron deficiency anemias and in other anemic conditions where additional iron is required by the body. Recent inclusion of ferrous gluconate in the National Formulary 8th Edition attests to this fact.

Ferrous gluconate manifests several advantages not encountered with other commonly used iron salts. First of all the iron is in the ferrous form, and in the second place upon oral administration relative freedom from gastrointestinal disturbance is observed. This is probably due to the presence of the atoxic gluconate radical which allows for rapid absorption and assimilation of the iron and liberation of the mild gluconic acid. Ferrous gluconate does not readily precipitate protein which also affords less irritation and gastrointestinal disturbance. Clinical investigation has shown that the iron in the ferrous gluconate is more efficiently absorbed and utilized for the formation of red blood corpuscles than the iron contained in most other common iron salts.

Ferrous Gluconate N.F. is a stable crystalline dihydrate salt containing about 11.3 per cent iron. It occurs as a pale greenish-yellow powder with a slight odor of burned sugar and is soluble in the extent of about 8.5 per cent in water. In dry products ferrous gluconate is stable and compatible and may be combined or admixed with other medicinals for the preparation of tablets or capsules for oral administration. For the formulation of liquid hematinic products, multivitamin, or multimineral preparations, ferrous gluconate is soluble and stable when properly handled. Overexposure to high temperature, light or oxidation produces ferric iron, but under normal circumstances the tendency towards oxidation may be reduced to a minimum.

Ferrous gluconate may also be employed in the preparation of sterile solutions for parenteral injection. Such solutions must be sterilized by bacterial filtration or by fractional heat sterilization at 60°C. and should be filled and sealed in the absence of air by displacement with nitrogen or similar inert gas.

Ferrous gluconate should be of special interest to all pharmaceutical manufacturers who contemplate the preparation of new hematinic products containing the new vitamin factors concerned with anemia therapy, as well as improving established hematinic or multivitamin products by employing this new source of iron.

Magnesium Gluconate

Magnesium has been demonstrated to be a nutritional essential for man, but the nature of its metabolic role is unknown. In some respects its metabolism parallels that of calcium but these two metals usually exhibit antagonistic effects in the system. Magnesium apparently has the same function in intracellular fluids

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as calcium does in intercellular fluids. It is known that magnesium is required for the functional integrity of the neuromuscular system, for relaxing smooth muscle which may produce pain. Magnesium deficiency is characterized by a marked hyperirritability and ultimately in pathological changes in the skeletal structure and muscular tissue. Enzyme investigations have shown that magnesium is an essential component in those systems concerned with the transfer of phosphate groups from one compound to another, as for example in carbohydrate metabolism.

Magnesium gluconate is a white crystalline powder containing 5.4 per cent magnesium, odorless and tasteless. It is stable in air and soluble to the extent of 16 grams per 100 ml. of water. Magnesium gluconate has the typical pharmacological actions of magnesium salts. Following oral administration, it exerts a mild, but quick-acting, cathartic action, which is characterized by the lack of irritation usually found with the more common magnesium salts. This property of diminished gastrointestinal disturbance allows for prolonged treatment, and large doses are palatable and well tolerated. Upon parenteral injection, magnesium gluconate exerts an energetic narcotic action, as do most magnesium salts.

Recent clinical investigations have indicated the value of magnesium gluconate in the treatment of certain hyperirritability conditions for which heretofore, no known therapy was beneficial. The injection of magnesium gluconate solutions has recently been reported of value in the treatment of eyclampsia, a convulsive condition associated with child birth. It has also been employed by the same route of administration for alleviating lung and chest pains occurring in certain forms of tuberculosis. Quite recently clinical investigation has shown magnesium gluconate to be effective, following oral administration in tablet or capsule form, for the hyperirritability and painful symptoms associated with spasmodic dysmenorrhea, a convulsive condition of the uterine muscles. Magnesium gluconate should, therefore, be of interest to manufacturers producing preparations designed for alleviating a painful premenstrual condition in women.

Because of its palatability, stability and low toxicity, the mild but quick-acting action, magnesium gluconate has been suggested as a laxative agent as a substitute for the more common inorganic salts, for which therapy larger doses can be tolerated over a longer period of time. Magnesium gluconate is also a fine source of the metal magnesium for multimineral or multivitamin preparations. Chemical stability and compatibility allow its incorporation in almost any type of pharmaceutical product.

Potassium Gluconate

Potassium is the major intracellular cation serving vital functions in the system related to water balance, acid-base balance, osmotic equilibrium, and neuromuscular activity. Clinical investigations have recently shown that an insufficiency or imbalance of potassium

is a significant factor in diabetic acidosis and infantile diarrhea and that the therapeutic use of potassium salts produces remarkable remission from these conditions. Potassium gluconate is a white crystalline powder, containing about 16 per cent potassium, odorless and with a mild saline taste. It is stable in air and very soluble in water. Potassium gluconate demonstrates the typical pharmacological actions of an organic salt of an alkaline metal. It is a mild alkalizing agent, has a diuretic effect and promotes the secretions of the bronchial, sweat, and other glands. Because of its stability and palatability, its use is practical as a systemic alkalizer in tablets, capsules, and powders, as well as for incorporation into expectorant preparations.

Beneficial results have been reported in the treatment of asthmatic and allergical conditions by the intravenous injection of potassium gluconate. As a source of potassium, potassium gluconate may be of significant value in the treatment of diabetic acidosis and infantile diarrhea either by the oral route or by parenteral injection. The usual source of potassium for both oral and parenteral injection is potassium chloride. Often it may be advisable to administer potassium without the coadministration of the chloride. Because of the low toxicity and palatability, potassium gluconate is an excellent source of potassium for such therapy.

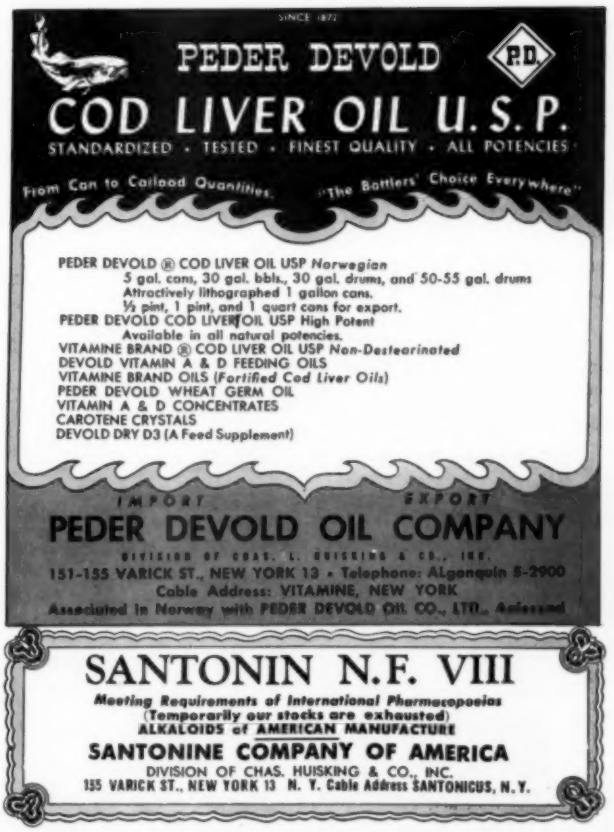
Sodium Gluconate

Sodium gluconate is a stable, white crystalline salt containing about 11 per cent sodium, odorless, and having a mild saline taste. Sixty grams are soluble in 100 cc of water. Sodium gluconate is an alkalizer having essentially the same pharmacological action as the more common sodium salts of organic acids. Inasmuch as there is little interest in the administration of sodium itself, there is little advantage to the use of sodium gluconate over the more common alkalizing agents, as for example, sodium citrate. One important pharmacological application which may be of interest is due to the anhydrous nature of sodium gluconate. This allows incorporation into tablets, capsules, or powders where other hydrated alkalizing agents can only be employed under difficult conditions. Sodium gluconate is non-toxic and has a very desirable palatability for this type of application.

Turning now to the four so-called trace elements, manganese, copper, zinc, and cobalt, whose essential nature for the maintenance of life has been rather definitely accepted, even though their metabolic role is obscure and not well known.

Manganese Gluconate

Manganese appears to be a dietary requirement of most all animals for optimum growth and for normal function of the reproductive system. It appears to be essential in some manner for the utilization of Vitamin B, and has been reported through clinical work to be required for normal growth activity and physiological development of children. In this regard, it probably functions as a catalyst since it has been shown to operate in this manner in several enzyme systems.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Manganese gluconate is a white crystalline salt with a faint pink tint, odorless, and with a slight astringent taste. It contains about 11 per cent manganese, is stable in air and soluble in water to the extent of about 11 grams per 100 ml. At the present time, the principal pharmaceutical uses of manganese salts are in multivitamin, multimineral, and hematinic preparations for oral administration as a dietary supplement. The stability and low toxicity suggests the potential value of manganese gluconate for such pharmaceutical preparations. In particular those preparations which are designed for supplementing the diet when mineral requirements are high, as in adolescence or pregnancy, where rapid growth may increase the requirement beyond normal levels.

Copper Gluconate

Copper is a second trace metal which is required nutritionally and is involved in the utilization of iron in the formation of blood. Renewed interest in copper metabolism as it may relate to certain types of anemia has been stimulated by the recent discovery of Vitamin B_{12}. A deficiency of copper in the body is associated with the development of an iron deficiency anemia condition most frequently observed in infants and young children. The exact manner in which copper acts in the utilization of iron is for the most part unknown, but it probably acts in some capacity in an enzyme system. The therapeutic use of copper salts has been in the past mainly for their fungicidal property

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and as such were incorporated into salves and ointments for the treatment of dermal infections. Recently, copper salts have been used in hematinic and multimineral preparations designed for dietary supplements.

Copper gluconate is the cupric salt of gluconic acid, containing about 14 per cent copper. It is a light-blue crystalline powder, odorless, and with a typical metallic taste. It is stable in air and soluble to the extent of about 30 grams per 100 ml. Copper gluconate demonstrates the usual bacteriocidal, fungicidal, and algalcidal action of copper salts and is of interest as a stable efficacious copper salt for use in such products. Because of its low toxicity, solubility, and stablity, it is suggested as a source of copper for combination with ferrous gluconate in multimineral vitamin and hematinic pharmaceutical products.

Zinc Gluconate

Zinc is an essential element for normal growth in animals and appears to be required for the efficient operation of certain enzyme systems. These enzyme systems are concerned with the absorption and metabolism of carbohydrates and proteins and seem to be particularly concerned with activity of insulin and the pancreas gland. A deficiency of zinc leads to a decreased capacity for converting foodstuffs to body tissue and hence in impaired growth. It is interesting to note that crystalline insulin, regardless of the method of preparation, always contains small amounts of zinc. It has

(*Continued on page 273*)

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Patent Thoughts and Trends

(*Continued from page 237*)

Oleic and linoleic acids	**About 45%**
Palmitic Acid	**About 30%**
Stearic Acid	**About 10%**
Lower fatty acids (Lauric, etc.)	**About 15%**

"The table which follows gives the results obtained. A minus (—) sign means all bacteria were killed. A plus (+) sign means some bacteria survived. Unless otherwise indicated, the compounds were tested in liquid soap.

Compound	Amount of Compound in soap	Concentration of Compound as tested	Exposure to Staphaureus at 20° C. 2 min.	10 min.
2,2′-dihydroxy-5,5′-dibromo diphenyl methane	3%	1:1000	—	—
		1:2000		+
2,2′-dihydroxy 3,5-3′,5′-tetra-bromo diphenyl methane	2%	1:1000	—	—
		1:1500	+	—
2,2′-dihydroxy-3,5,6-3′,5′6′-hexabromo diphenyl methane	2%	1:1500	—	—
		1:2000	+	—
2,2′-dihydroxy-3,5-3′,5′-tetra-chloro diphenyl methane	2%	1:1000	—	—
		1:1500	+	—
2,2′-dihydroxy-3,5,6-3′,5′,6′-hexachloro diphenyl methane	1%	1:2000	—	—
		1:3000	+	—
				at 37° C.*
2,2′-dihydroxy-3,5,6-3′,5′,6′-hexachloro diphenyl methane	1.5% (In white solid soap)	1:2000	—	—
		1:3500	+	—
Sodium Salt of 2,2′-dihydroxy 3,5,6-3′,5′,6′-hexachloro diphenyl methane	1.5% (In white solid soap)	1:2000	—	—
		1:3500	+	—

*A temperature of 20° C. was found to yield a jelly-like mass when solid soap was tested. Accordingly, 37° C. was adopted as the temperature of test.

"The foregoing data indicate the practical applicability as germicidal soaps of soaps containing small amounts of a 2,2′-dihydroxy halogenated diphenyl methane compound. For example, these results show that 2,2′-dihydroxy-3,5,6-3′,5′,6′-hexachloro diphenyl methane is capable of killing Staphylococcus aureus in a concentration of 1 to 3500 in the presence of large excess of soap. Since soap is usually diluted about 20 times in making a lather for normal toilet purposes, it follows that the 2,2′ - dihydroxy - 3,5,6-3′,5′,6′-hexachloro diphenyl methane need be present in the soap in a concentration of only 1 part to 175 parts of soap or about 0.6% to yield an effective germicidal soap. For practical reasons, however, we prefer, as above states, to use somewhat larger amounts of the added germicidal agent.

"Our germicidal soaps, which are indistinguishable in appearance from ordinary toilet soaps, may be used as ordinary detergent soaps and are especially recommended for uses in which both detergent and degerming characteristics are desired. Soaps containing 2% of 2,2′ - dihydroxy - 3,5,6-3′,5′,6′-hexachloro diphenyl methane have already been used daily by a considerable number of persons over a period of months, with excellent results. In addition, it has been noted that soap containing 2% of 2,2′ - dihydroxy - 3,5,6-3′,5′,6′-hexachloro diphenyl methane is particularly valuable for routine surgical and hospital use and generally helpful as a prophylactic agent in the prevention of infections caused by pathogenic bacteria on the skin. Also, results indicate that such a soap, used routinely for a period of a week, materially reduces the bacterial population of the skin and that a surgeon would be able to maintain at all times under normal conditions as low a bacterial population on his skin as the surgeon might expect to have after he has prepared himself for an operation by means of the standard hospital 'scrub-up' technique. Such results have not been reported for any other soaps thus far tested.

"The term 'soap' as used herein is employed in its popular or ordinary meaning. The term refers to cleansing agents, made usually by the action of alkali on fat or fatty acids and consisting essentially of sodium or potassium salts of fatty acids, both saturated and unsaturated.

"The term 'germicidal soap' for the purposes of this patent application refers to those soaps which are effective against Staphylococcus aureus. For example, if a soap is effective against Staphylococcus aureus, the soap is considered to be germicidal, whether or not it is effective against any other types of bacteria.

"The condensation products used in this invention may be prepared by condensing certain phenols with formaldehyde or formaldehyde-yielding substances in the presence of sulfuric acid at temperatures between about 0° C. and 20° C., the reaction occurring, advantageously, in the presence of a liquid which is inert under the conditions of the reaction and which is further characterized by being a solvent for the phenol employed and also by being miscible with sulfuric acid. The resulting 2,2′-dihydroxy halogenated diphenyl methane may be isolated in known manner. An example of a known way to isolate the desired condensation product is that wherein the products of reaction are quenched in ice or ice water and the resulting precipitate is washed acid-free; the washed precipitate is then dried and recrystallized from a solvent such as benzene or toluene; and finally, the recrystallized product is dried to remove substantially all of the solvent therefrom.

"The alkali metal salts of the condensation products may be prepared by treating a solution of the condensation products used in this invention with an aqueous alkali hydroxide solution and filtering the resulting alkali metal salt.

"In the claims the recitation of the halogenated dihydroxy diphenyl methanes is intended also to include the corresponding mono-alkali metal salts.

"The foregoing illustrates the practice of our invention which, however, is not to be limited thereby but is to be construed as broadly as permissible in view of the prior art and limited solely by the appended claims."

Claims

"1. A germicidal detergent soap comprising soap and a minor proportion of 2,2′-dihydroxy halogenated diphenyl methane.

2. A germicidal detergent soap comprising soap and 1 to 3% of a 2,2′-dihydroxy-halogenated diphenyl methane.

"3. A germicidal detergent soap comprising soap and minor proportion of 2,2′-dihydroxy-3,5,6-3′,5′,6′-hexachloro diphenyl methane.

"4. A germicidal detergent soap comprising soap and 1 to 3% of 2,2′-dihydroxy-3,5,6-3′,5′,6′-hexachloro diphenyl methane.

"5. A germicidal detergent soap comprising soap and minor proportion of 2,2′-dihydroxy-3,5-3′,5′-tetrachloro diphenyl methane.

"6. A germicidal detergent soap comprising soap and 1 to 3% of 2,2′-dihydroxy-3,5-3′,5′-tetrachloro diphenyl methane.

"7. A germicidal detergent soap comprising soap and minor proportion of 2,2′-dihydroxy-3,5-3′,5′-tetrabromo diphenyl methane.

"8. A germicidal detergent soap comprising soap and 1 to 3% of 2,2′-dihydroxy-3,5-3′,5′-tetrabromo diphenyl methane."

Patent Office Attitude

Drs. Kunz and Gump were unsuccessful in obtaining allowance of any of their claims before the Patent Office tribunals, namely, the Patent Office Examiner and the Patent Office Board of Appeals. The Board conceded that the only previous germicidal soaps, those containing mercurial germicides, had the drawback of a cumulative toxic effect and that it had long been recog-

(*Continued on page 278*)

The Gluconates

(Continued from page 271)

been suggested that the storage or utilization of insulin in the pancreas gland is in some way functionally controlled by the action of zinc.

Zinc gluconate is a white crystalline compound containing about 14 per cent zinc and is readily soluble in water. The material is stable in air and of extremely low order of toxicity. The principal use of zinc salts in pharmaceutical preparations is in multimineral products and to a lesser extent in hematinic preparations. The use of zinc gluconate is suggested for incorporation into such products. Certain zinc salts have been employed for their astringent actions and zinc gluconate exhibits a mild but definite astringent effect. Because of its low toxicity and stability, zinc gluconate may be of interest in astringent preparations.

Cobalt Gluconate

The biological significance and dietary requirement of cobalt was established about a decade ago, but in the past year considerably more light was cast upon its apparent metabolic role, when its presence at a level of 4½ per cent, was detected in the Vitamin B_{12} molecule. It was known for some time that cobalt was concerned in certain nutritional anemias and that traces of this metal were required for efficient red blood cell formation. Since the essential nature of Vitamin B_{12} in certain anemic conditions has now been demonstrated, the previously reported apparent necessity for cobalt seems explained. Cobalt itself in large amounts produces an abnormal increase in blood cells which, however, do not mature normally.

A limited use of cobalt salts in pharmaceutical preparations is found as an additive in dietary supplement preparations of the mineral type. Cobalt gluconate is a pink, crystalline material readily soluble in water and because of its stability should be of interest for preparations of this nature as an excellent stable source of this element.

In conclusion, it may be indicated that the advantages, generally, of the metallic salts of gluconic acid for pharmaceutical application lies in their stability, their relatively high solubility in water, and their low toxicity. Their pharmacological actions for the most part are more characteristic of the metal involved as the cation inasmuch as the gluconate itself has little or no physiological action.

Many other crystalline metallic salts of gluconic acid have been prepared and may be of interest for pharmaceutical work, as for example the bismuth, antimony, aluminum, and ammonium salts. Because of the low toxicity of the gluconate radical, gluconic acid has also been employed for the preparation of salts of many drugs which are organic bases. Some of these of which may be of interest for pharmaceutical application are the gluconate salts of quinine, strychnine, ephedrine, choline, and streptomycin. These salts are for the most part relatively soluble in water and the gluconate radical allows the administration of

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Dysmenorrhea

(Continued from page 191)

When marriage does appear to result in relief, it can be said that such relief is due to relaxation from the physical and mental tension of unsatisfactory single life. Shute also has definite views with respect to the relief of painful dysmenorrhea, caused by childbirth. In his opinion this is due more to the new and more normal mental and hormonal balance that follows, than to any mechanical effect on the uterine musculature ascribable to birth traumata.

Lack of knowledge concerning the cause of dysmenorrhea is reflected in the lack of specific therapeutic measures. As remarked by one gynecologist,[6] many theories have been advanced and as many methods of treatment have been developed. This is reflected in the statement[4] that, "These treatments run the gamut of medical and surgical practices and, to name only a partial list, include psychotherapy, hypnosis, physical exercises, antispasmodics, sympathomimetics, analgesics, hypnotics, antihistamine drugs, placebos, antiallergens, endocrines of all sorts—estrogen, progesterone, testosterone, pregnant mares serum, thyroid, surgical procedures, dilatation of the cervix, stem pessaries, trachelorrhaphies, presacral sympathectomies."

Of course certain amounts of dependable information has been gathered over the years and definite progress in therapy has been made. As with so many other conditions, there are certain considerations to be followed in the general treatment of the disorder. As noted by Rutherford,[12] a large number of patients with primary dysmenorrhea will benefit greatly by a simple explanation of the physiology of menstruation plus reassurance that the pelvic viscera and function are normal.

Obviously, says he, general hygienic or corrective measures should be employed as well. Authorities[1] stress the importance of good nutrition and the need for a well balanced diet with sufficient vitamins, calcium, and iron. Also stressed[7] is that fatigue, nervous tension, and exhaustion must be avoided at all times by regulated exercise and adequate rest and sleep.

Sometimes medication may be required and sedatives, analgesics and antispasmodics find valued employment in treating dysmenorrhea. The administration of such drugs, singly or in combination, often provides considerable relief. Thus the use of a mild sedative, such as a phenobarbital preparation or other suitable barbiturate, may be indicated to induce sleep, secure needed rest, and lessen tension. Pertinent too is Hasseltine's[13]

observation that some women may avoid incapacitation through the appropriate dosage of sedative, like phenobarbital. Medication is started a few days before the expected onset of the menses and continued through the period of expected distress.

The analgesic drugs are often employed to lessen the pain of dysmenorrhea. Those most frequently used and the dosage commonly given are: acetylsalicylic acid 0.3 Gm. or 5 grains, acetophenetidin (phenacetin) 0.3 Gm. or 5 grains, and acetanilid 0.2 Gm. or 3 grains. It is suggested[8] that an analgesic be given every three or four hours, beginning one day prior to the expected attack. It is also noted that the power of any one of these three drugs can be enhanced by combining it with 0.12 Gm. (2 grain) of caffeine citrate.

This last recalls that the familiar combination of aspirin, phenacetin and caffeine, known as A.P.C., is also much used to relieve the pain of dysmenorrhea. A typical prescription[7] for this purpose is as follows:

Acetylsalicylic acid	**0.22 Gm.**
Acetophenetidin	**0.16 Gm.**
Caffeine	**0.03 Gm.**

The dose is two capsules every four hours.

In more severe cases, codeine may be prescribed. However it is advisable to avoid other habit-forming opiates. Whisky, which is classed as an analgesic by some[8] and as an antispasmodic by others,[7] also is useful for relieving the distress of dysmenorrhea.

The antispasmodics, says Schuck,[14] are an old and well explored means for the prevention and treatment of the cramplike pains of dysmenorrhea. He remarks that some experienced physicians advocate atropine in small doses as the safest and least harmful means for relief. For this purpose the belladonna alkaloid is given orally in 0.5 mg. amounts three times daily for two days preceding the onset of the menstrual flow, and is continued for two days after the onset.[15]

Certain synthetic substitutes for the belladonna alkaloids are finding increasing use as antispasmodics to combat uterine spasm. Prominent in this group are Syntropan (Hoffmann-La Roche), Trasentin (Ciba) and, more recently, Pavatrine (Searle). It is reported[15] that the use of Syntropan allows more discrete therapeutic results and it is possible to obtain relief of spasm without the accompanying mydriasis, dry mouth and changes in cardiac rate associated with atropine. The studies of Kurzrok and his coworkers[16] have shown the value of Trasentin in spastic dysmenorrhea. Considerable investigation[17,18] has been made more recently on the effectiveness of the non-narcotic antispasmodic available as Pavatrine. It was found that, in appropriate dosage, the drug has a spasmolytic action comparable, to that of atropine, without the latter's disadvantages.

Other types of drugs with antispasmodic action find use in the palliative treatment of dysmenorrhea. Papavarine hydrochloride is one of the agents recommended[7] for this purpose. It relaxes many smooth muscles of the body and this relaxation occurs particularly if spasm exists.[15]

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Of a different nature is a pancreatic extract known as Depropanex (Sharp & Dohme). It has been tested by Grossmann[8] who found that the extract is very effective when administered to patients with dysmenorrhea. He feels this favorable response is due to the spasmolytic action of Depropanex on the uterine muscle.

As previously indicated, various combinations of sedatives, analgesics and antispasmodics are used to give a more rounded therapeutic effects in cases of dysmenorrhea. Thus, for the treatment of the more severe cases, Randall and Odell[3] recommend two prescriptions, either of which may be used. The first, which gave the most consistent relief from symptoms, has the following quantities of drugs in each capsule:

Acetylsalicylic acid	**5 grains**
Codeine	**½ grain**
Ergotine	**1 grain**
Atropine sulfate	**1/150 grain**

Ergotine is included because it is believed that it aids the relief by increasing intrauterine tone.

The second prescription, also given in quantities per capsule, is as follows:

Camphor monobromate	**½ grain**
Atropine sulfate	**1/150 grain**
Papaverine hydrochloride	**¼ grain**
Acetophenetidin	**3 grains**
Acetylsalicylic acid	**3 grains**

It is reported[5,19] that this last prescription has been used with much success in a large hospital. One capsule every four hours, beginning the day before the expected menstrual period, and not over four capsules daily.

Commercial modifications of this combination are available, one of which is said[5] to employ the following mixture per unit dose:

Camphor monobromide	**½ grain**
Acetylsalicylic acid	**3½ grains**
Acetanilid	**2½ grains**
Caffeine	**½ grain**

The same source provides an example of a preparation combining a sedative, an antispasmodic and an analgesic to yield an optimum effect:

Phenobarbital	**0.4 Gm.**
Extract of hyoscyamus	**0.4 Gm.**
Acetanilid	**2.3 Gm.**

This is sufficient to make 12 capsules. Starting the day before the onset of menstruation, the dose is one capsule every four hours, not over four a day.

Various other combinations for relieving the pain and related symptoms of dysmenorrhea have been mentioned from time to time. Winther,[1] for example, observes that temporary relief has been obtained in many cases with a combination of Propadrine (Sharp & Dohme) or ephedrine hydrochloride with a barbiturate and aspirin. The amounts are varied according to the reactions of the individual. Various proprietary modifications are also available.[20,21]

Of course, many other drugs have been or are being tried as means of relieving dysmenorrheic pains. Thus, considerable attention has been focused on the use of amphetamine sulfate in this condition. Different degrees of success have been obtained by different workers[10,22,23,24] but many patients have benefited from the use of this drug. It is noteworthy that, in his section on the medical therapy of dysmenorrhea, Greenblatt[21] recommends the use of amphetamine sulfate in a dosage of 5 mg. every four to six hours for two or three doses.

Amphetamine has been combined with aspirin and phenacetin to provide a product known as Edrisal (Smith, Kline & French). In a report on tests with these tablets, Long[25] observed they not only relieve the pain of dysmenorrhea, but also combat the depression.

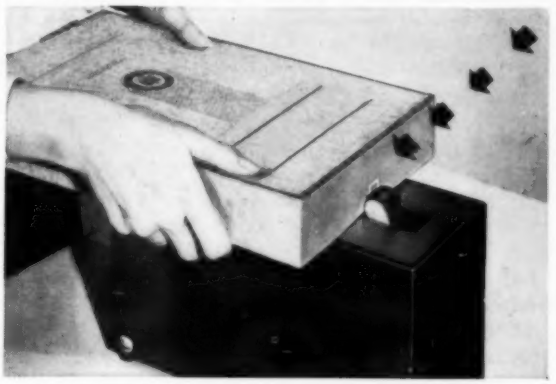
Despite their newness, it is interesting to note that some clinicians[26] have used the antihistaminic drugs for treating dysmenorrhea. Macpherson,[27] for one, reports the use of adrenalin and, more recently, antihistaminic drugs in the treatment of severe cases of dysmenorrhea. He advised a wider trial of antihistaminics in the therapy.

Aminophylline may also have a place in the treatment of dysmenorrhea according to the findings of Anderson and McIntyre.[28] They tried this drug because of its effect on smooth muscle. In tests on 100 cases, the tablets used contained a combination of aminophylline, caffeine, acetophenetidin, acetylsalicylic acid and sodium iron pyrophosphate. Placebos given to exclude the psychic element did not produce the same effect. Aminophylline alone produced slightly less favorable results than did the combination of drugs. The tablets containing the combination of drugs produced satisfactory results in 70 per cent of the cases and partial relief in 16 per cent; no relief in 14 per cent.

Various other drugs have received the attention of research workers. Using magnesium gluconate for treating menstrual distress, Rawlings[29] obtained relief in a high proportion of his cases. More recently, Griffith and Little[30] studied the potentialities of vasodilators in the treatment of dysmenorrhea. They found that oral Priscoline (Ciba) gave satisfactory clinical relief in 73 per cent of their patients. However, a combination of this drug and nicotinic acid gave complete or nearly complete relief in 97 per cent. Mention should be made of Greenblatt's[21] suggestion that vitamin B complex is useful, especially in prolonged bleeding.

Because without the influence of endocrine secretions no menstruation is possible, the hormones must certainly play a major part in the normal and abnormal sequences of menstruation.[4] Hence, on the theory that an endocrine imbalance is responsible for the disturbance, hormone therapy has been employed in the therapy of dysmenorrhea. As indicated by numerous reports, most of the hormones have been tried in the treatment of this condition. However, as noted by Hesseltine,[13] these studies have also made evident the temporary value and limitations of this type of therapy. Some[7] feel it is impossible to evaluate how much psychotherapy influences the results obtained by hormonal therapy.

(*Continued on page 280*)



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(*Continued from page 272*)

nized that while germicidal soap having a phenolic germicide present in a minor proportion was highly desirable all knowledge at the time that Drs. Kunz and Gump filed their application indicated that such a composition was ineffective or poorly effective and that the general conclusion of those working in the field was that phenolic germicides would not function properly when admixed with soap in minor proportions. Nevertheless, the Board refused to allow any of the claims.

Accordingly, it was necessary to appeal to what is in effect the Supreme Court as far as obtaining of patents is concerned. This court is the U. S. Court of Customs and Patent Appeals. The latter court disagreed entirely with the Patent Office Tribunals and in a decision reported at 85 United States Patents Quarterly 239, reversed the Patent Office and allowed all of the claims in the case.

The Court noted that the following references were relied upon by the Patent Office:

"Bruson, 1,987,228, Jan. 8, 1935,
Andersen, 2,059,195, Nov. 3, 1936,
Gump, 2,250,480, July 29, 1941,
Hartung, 2,251,934, Aug. 12, 1941,
Hartung, 2,251,935, Aug. 12, 1941,
I.G.F.A. (French), 690,820, June 30, 1930,
Lever Bros. (British), 427,324, Apr. 23, 1935."

Court Considers Prior Art and Patent Office Treatment Thereof

The Court carefully went over the prior art references and the Patent Office treatment of them in relation to the claims, and had the following to say:

"The Primary Examiner rejected claims 1 to 4, inclusive, as lacking in invention, first, over the French patent; second, over the Gump patent; and, third, over either the Andersen patent or the British patent.

"The examiner stated, with respect to the French patent, that it disclosed:

"'* * * that the compound 2,2'-dihydroxy-3,5-3',5'-tetrachloro diphenyl methane is a well-known germicide and bactericide. The French patent also discloses the dichloro derivatives of the compounds specified in claims 1 and 2.'

"We do not find the word 'germicide' used in the patent, but 'bactericides' is used along with 'disinfectants.' The product is said to be 'capable of destroying microbes' and 'capable of preserving objects from attack by microbes.' Other recitations are the treatment of 'infected objects or those in danger of being infected' and the impregnation of 'bandages, etc. which will remain odorless after use' with the product named in examples recited in the patent.

"A further recitation of the patent is:

"'We can preserve seeds by treating them with a mixture of di- or triphenyl-methane products with talc. The seeds are not attacked by erysiphaceae (mildew), etc. Also we can avoid the formation of moisture spots, similar damages to textiles, papers, leather and wood, cosmetics, etc.'

"There is no suggestion that the product is capable of being used to produce a germicidal detergent soap.

"The patent of Gump (one of the appellants in the instant case) discloses that the phenol, 2,2'-dihydroxy-3,5,6,3',-5', 6'-hexachloro-diphenyl methane is a white, practically odorless and tasteless solid crystalline compound; that it exhibits antiseptic and disinfecting action against microorganisms particularly against bacteria of the type of staphylococcus aureus; and that it may be employed with substances such as tooth powders, tooth pastes, ointments, creams, and cosmetics. There is no suggestion in the patent of employing it to produce a detergent soap having germicidal properties.

"In his statement the examiner says, relative to his rejection on the Andersen and British patents:

"'* * * The patents show soap containing a germicide and capable of killing bacteria of the type disclosed by applicants in accordance with standard tests. The germicides disclosed by Andersen and the British patent are characterized by low toxicity and retain their germicidal activity when incorporated in soaps. The addition of other well known germicides having such properties to soap to produce a germicidal soap would not, in the opinion of the Examiner, involve invention over Andersen or the British patent.'

"The examiner did not recite in his statement the character of the germicide used in the Andersen and British patents. This was done by the board, however, in the following:

"'Andersen and the British Patent 427,324 disclose *mercurial compounds* that are germicides admixed with soap. As pointed out in the brief [for appellants] on page 15, mercurial germicides *have the disadvantage of cumulative toxicity on the user.* (Italics supplied)

"'This fact has caused much investigation to substitute a phenolic type of germicide in soaps for its germicidal action. By reference to Hampil, Journal of Bacteriology, volume XVI, pp. 287-300 (1928) and by presentation of affidavits, appellants seek to establish that the incorporation of phenolic substances in minor proportion (e.g. 1-3%) in soaps so as to have both the detergent action of the soap and the germicidal action of the phenolic substance has long been recognized as desirable but that all such mixtures that have been tried and tested have either proven ineffective or but poorly effective probably due to some inhibiting action of the soap on the activity of the germicide.'

"The board then discussed the patent to Bruson, in which the use of octylphenols in soaps and oil is suggested but does not appear to be claimed, and the two Hartung patents, which disclose the incorporation of alkyl cresols in soaps of saturated fatty acids.

"With respect to the octylphenols of Bruson, the board said:

"'* * * appellants have attempted to show that these phenols show a marked decrease in action in aqueous soap solutions and lose it entirely in dilutions of 1:500.'

"With respect to the Hartung patents, the board said that appellants argue 'that ordinary soaps * * * contain appreciable amounts of salts of unsaturated fatty acids leaving a strong inference that the Hartung phenols would not function in the latter type of soaps to which appellants' claims are generic.'

"The board made no statement as to whether it regarded the Bruson patent and the Hartung patents as references of any real consequence in this case, and we have not the benefit of its view upon that matter, except as it may be inferred from the following statement in its opinion:

"'For the purpose of this decision, it is assumed that the state of the art effective against this application is as follows: (a). The only completely effective germicidal soaps were those containing mercurial germicides. Such soaps had the drawback of a cumulative toxic effect of the mercurial compound. (b). It had long been recognized that a germicidal soap with a phenolic germicide present in minor proportion was highly desirable but that all knowledge at the time of the filing of this case indicated that such

a composition was either ineffective or but poorly effective and that the general conclusion of those working in the field was that phenolic germicides would not function properly when admixed with soap in minor proportions. The above assumptions are made as being the most favorable ones to appellants under the facts of the case.

" 'Under the situation so evaluated, it is thought that the prior art clearly teaches the desirability of incorporating a minor proportion of the phenolic compound in a soap to render the same germicidal. Thus it follows that the prior art teaches all persons interested in germicidal soaps that as each new phenolic material is developed, and each phenolic material which had not heretofore been tried in a soap composition, should obviously be tested as a routine matter to determine whether or not it was effective. This being the case, no invention whatsoever is involved in trying out what the prior art clearly teaches should be tried and determining the degree of effectiveness.'

Court's Holding

"We feel constrained to disagree with the concurring conclusions of the respective tribunals of the Patent Office.

"From the record in the case, including the factual (not opinion) statements in the affidavits filed on behalf of appellants and, so far as pertinent, the several publications introduced in evidence, together with the statements in appellants' specification, we have no doubt that appellants, by the use of the particular compound defined in the claims, have produced a germicidal detergent soap—that is, a 'composition of matter' to use the statutory phraseology—which is entirely new and very useful. We think the product is the result of invention.

"[1] It is true, of course, that the compound used by appellants is a patented product (the Gump patent), but we are unable to discern why this fact should be regarded as even persuasive against the patentability of a composition of matter in which it is used as an ingredient.

"We do not regard the Andersen and British patents disclosing the use of *mercurial compounds* as relevant references. The compound used by appellants is entirely different from the compound used by the patentees, and the soap product in which a mercurial compound is used is not suitable for use for the same purposes as the soap defined in the claims on appeal.

"From what hereinbefore has been stated relative to the Bruson patent and the Hartung patents, it seems obvious that there should be no rejection of the appealed claims on these patents.

"[2] We are satisfied that appellants present in their application not only a useful composition of matter but a composition which, although long desired, had not been produced until appellants produced it. Their production of it may have followed many experiments, but we have never understood that experimentation, study and labor, of themselves, destroyed inventiveness.

"In our opinion, all the claims on appeal should be allowed."

General Comment

It is understood that Great Britain and other foreign countries granted patent protection to Drs. Kunz and Gump as a matter of course, but more than ten years were needed by Drs. Kunz and Gump to convince the U. S. Patent Office that they were entitled to a patent on their invention. The U. S. public, however, put its imprimatur on the invention in a matter of months, as witness the remarkable reception given to soaps made in accordance with the teachings of the patent application. The best known soap in this category is DIAL.

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Dysmenorrhea

(*Continued from page 277*)

Another important factor with respect to such therapy is brought out in Greenblatt's[21] observation that, in general, the endocrine status of the dysmenorrheic patient is no different from that of the normal woman. Very similar statements have been made by other authorities. "Indeed," says Bickers,[31] "the ovarian function of the patient is more consistently normal as shown by the consistent presence of a corpus luteum. The regular appearance of ovulation in dysmenorrheic patients is the best evidence of normal gonadotropic hormone production and normal ovarian response."

Therefore, as remarked by Winther,[1] it cannot be expected that hormone therapy will have any effect on the majority of cases, unless it can be demonstrated that there is some hormonal imbalance. Nonetheless, endocrine therapy is often valuable, even though the rationale of the therapy is not always clear.[21]

Endocrinotherapy is a complicated subject. It is unfortunate that space does not permit a detailed discussion of the many factors that enter the picture, as for example, in the case of progesterone therapy. Thus, the ovary secretes an estrogenic or follicular hormone which stimulates uterine contractions, and progestin or corpus luteum hormone which decreases uterine contractions. Logically, therefore, the administration of progesterone should lessen the pain during menstruation.[1] Despite the logic, this does not always happen, but relief is obtained in many instances.[32,33]

When indicated to relieve the spasmodic type of dysmenorrhea, progesterone by injection or, preferably, anhydrohydroxy progesterone by mouth, is given for seven days prior to and during menstruation. After such therapy for three or four successive cycles, dysmenorrhea may not occur for variable periods of time.[7]

There is a different basis for the use of estrogens. In some women, dysmenorrhea is associated with uterine hypoplasia, and the administration of the estrogenic substances promotes vasculanization and the growth of hypoplastic organ. Given in larger doses, estrogen therapy suppresses ovulation. While some work[34,35] indicates that estrogens have little or no effect, the findings of other investigators[36,37,38] show that these substances are capable of affording relief.

Typical of one view is the statement by Randall and Odell[3] that the suppression of ovulation by estrogens to produce painless menses is of interest, but is of questionable value and possibly dangerous. In contrast, Greenblatt[21] says that, "In a seemingly normal female, when one is at a loss to know where to begin, and alleviation of pain is not obtained with therapeutic measures, the best endocrine therapy is the use of estrogenic substances." Although injections are sometimes given, the oral forms, including the synthetic diethylstibestrol,[39,40,41] are generally used when estrogen therapy is indicated.

Testosterone, the male hormone, may also be used in the treatment of dysmenorrhea, particularly in re-

fractory cases[8,42] It may be administered by intramuscular injection as testosterone propionate or by mouth as methyl testosterone, by pellet implantation and inunction in a suitable ointment base.[21] Its action is not clear but it is believed the hormone causes neutralization of estrogens, suppression of ovulation, or a direct action on the hypophysis or the uterus.[7,43]

Other endocrine substances find employment to relieve the pain and other symptoms of dysmenorrhea. Shute,[11] for example, speaks highly of the value of thyroid extract. It is particularly applicable in patients with low metabolic rates. Chorionic gonadotropic hormone or equine gonadotropic hormone, though sometimes used, are said[43] to have little physiologic basis in the treatment of dysmenorrhea.

In very severe cases, it may be necessary to resort to surgical procedures. While surgical intervention is often very helpful,[44] it is by no means always successful.[6] Some authorities[3] are of the opinion that operations such as hysterectomy, uterine suspension and presacral sympathectomy are unnecessary in the treatment of primary dysmenorrhea if the patient is properly handled.

Indeed, authorities constantly stress the importance of the mental or psychic factor in dysmenorrhea.[9,21] Randell and Odell[3] point out that many sufferers have frequently approached the menarche already conditioned for a serious ordeal. The first objective in treating such a patient is to assure her that she is absolutely normal and to explain the basic physiology of menstrual distress. By the proper psychotherapy, says Robertson,[45] it is possible to correct the mental attitude, calm the fears and raise the pain threshold.

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ADVERTISING INDEX

Albek, Inc., Albert....240
Alsop Engineering Corp....232
American Cholesterol Products, Inc....240
Anchor-Hocking Glass Corp....206-207
Ansbacher Siegel Corp....147
Armstrong Cork Company....Insert facing 196
Arnold, Hoffman & Company....250
Atlas Powder Co....151
Avon-Allied Products, Inc....168

Baker Chemical Co., J. T....210
Beauty Fashion....172
Bridgeport Metal Goods Mfg Co....204
Burke Company, Edward S....279
Bush & Co., W. J....254

Calco Chemical Division....160
Calif. Fruit Growers Ex....234
Calumet Manufacturing Co., Inc....248
Camilli, Albert & Laloue, Inc....274
Carr-Lowrey Glass Co....205
Cavalla, Inc., A....281
Chrystal & Co., Charles B....248
Colgate-Palmolive-Peet Co....283
Colton Company, Arthur....228
Commercial Solvents Corp....169
Continental Can Company....202
Corn Products Sales Company....279
Crown Cork & Seal Co....200

de Laire Division of Dodge & Olcott, Inc....148
Devold Oil Co., Inc., Peder....269
Disbrow Manufacturing Co., Inc....204
Distillation Products, Inc....165; 220
Dodge & Olcott, Inc....159
Dow Chemical Co....163
Dreyer, Inc., P. R....150
du Pont de Nemours & Co., (Inc.), E. I....Insert facing 149
Durlin Corp....Insert bet. 148-149

Economic Machinery Co....264
Emery Industries, Inc....155
Eppenbach, Inc....258
Ertel Engineering Corp....276

Fairmount Chemical Co., Inc....281
Felton Chemical Co., Inc....170
Filter Paper Company....254
Firmenich & Co., Inc....Insert facing 244
Florasynth Labs., Inc....156
French, Inc., Benj....250

Gane & Ingram, Inc....258
Givaudan-Delawanna, Inc....Insert bet. 172-173
Glycerine Products Assn....143
Goldschmidt Chem. Corp....238
Greeff & Co., R. W....258
Gunning & Gunning, Inc....262

Hercules Powder Company....Insert facing 148
Heyden Chemical Corp....218
Hoffmann-LaRoche, Inc....252
Hormann & Co., F. R....274
Huisking & Co., Inc., Chas L....269

Industrial Chemical Sales....Cover 2
Inland Alkaloid Co....254
Island Equipment Corp....275

Jelly & Co., Walter H....254

Kelton Cosmetics Co....261
Kessler Chemical Co....236
Klinker Mfg. Co....236
Kohnstamm & Co., H....Insert facing 156
Kolmar Laboratories....Insert facing 157
Kolograph Company....271

Leonhard Wax Co., Theodore....280
Lueders & Co., George....154

Magnus, Mabee & Reynard, Inc....280
Mallinckrodt Chemical Wks....Insert facing 173
Merck & Co., Inc....152
Metzgar Company....258
Michel & Co., Inc., M....283
Mills Corp., Elmer E....208
Minnesota Mining & Mfg. Co....277
Monsanto Chemical Company....146

National Aniline Division, Allied Chemical & Dye Corp....260
Naugatuck Aromatics....162
Neumann, Buslee & Wolfe, Inc....277
New Jersey Zinc Co....268
N. Y. Quinine & Chemical Works, Inc....171
Norda Essential Oil & Chemical Co., Inc....212

Owens-Illinois Glass Co....226

Parsons Imports, M. W....246
Penick & Co., S. B....164
Pennsylvania Glass Products Co., Inc....198
Pennsylvania Refining Co....149
Perl Machine Mfg. Co....273
Pfaltz & Bauer Co., Inc....283
Pfizer & Co., Inc., Chas....Cover 4
Pittsburgh Plate Glass Co., Columbia Chemical Division....157
Plax Corp., Division, Hartford-Empire Co....214
Polak & Schwarz, Inc....Insert facing 172
Polak's Frutal Works....161
Progressive Machine Works....283
Pulverizing Machinery Company....232

Reinitz Soap Corporation....265
Richford Corp....194
Roure-Dupont, Inc....216

Santonin Company of America, Inc....269
Seeley & Co., Inc....271
Seydel Chemical Co....281
Sheffield Tube Corp....141
Snell, Inc., Foster D....276
Standard Cap & Moulding Co., Inc....Insert facing 197
Standard Pharmacal Co....248
Sterwin Chemicals, Inc....283
Stokes Machine Co., F. J....230
Stokes & Smith Co....267
Strong Cobb & Co., Inc....222
Sturge Ltd., John & E....158
Synfleur Scientific Labs., Inc....Insert facing 245
Syntomatic Corp....144
Syntron Company....270

Tamms Industries, Inc....281
Terkelsen Machine Co....248
Thurston & Braidich....271
Tombarel Products Corp....153
Trade-Mark Record Book....280

Ungerer & Co., Inc....Cover 3
U. S. Automatic Box Machy Co....224
U. S. Bottlers Machinery Co....263
U. S. Industrial Chemicals, Inc....145
U. S. Pharmacopoeia....246

van-Ameringen-Haebler, Inc....166-167
Verley & Company, Albert....Insert bet. 164-165
Verona Chemical Co....Insert bet. 148-149
Vitamerican Oil Corporation....270

Welch, Holme & Clark, Inc....266
Will & Baumer Candle Co....275
Witco Chemical Co....284
Wolf & Co., Jacques....270